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NATO & Iraq:

Factis Non Verbis

By

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CADRE Quick-Look

Catalyst for Air & Space Power Research Dialogue

NATO & Iraq: Factis Non Verbis (By Deeds, Not Words)

PROBLEM: Iraq--specifically the small Alliance military commitments to the rebuilding of the country.

WAY AHEAD: This is a thematic report that assesses several prominent aspects of NATO and the possibility of expanding its operations in Iraq. It begins with an examination of the Alliance's political context, to discuss the concept of consensus, central tenets of the NATO charter, the debate over "out-of-area" military action, and high-level decisions on Iraq made by the North Atlantic Council. Next, energy resources (oil and natural gas) are examined, to present the prominence of the Persian Gulf region, dependencies within the economies of NATO nations, and the impact of regional instability on the worldwide prices of these fluid fossil fuels. The author, a former NATO requirements officer, then examines the Alliance's military forces, to show defense expenditures, force structures, and operational experience, which reveal tremendous capabilities and an available pool of forces. Iraq is then discussed, to show potential locations and missions that could be conducted by a NATO-led division. Essentially, this is a positive, but prodding story. The Alliance has overcome the divisive period of early 2003, reached unanimous agreement on a number of contentious issues, and has begun to formally contribute resources to important tasks within Iraq. However, the Alliance has significant political, economic, and military interests in the successful rebuilding of Iraq and, as such, should be formally contributing to broader missions in the country. This is a defining period for the newly expanded, post-Cold War Atlantic Alliance. NATO has the interests, capability, and obligation to do much more in Iraq. The very relevance of the Alliance is at stake.

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Abbreviations

ACDIS	Program in Arms Control, Disarmament and International Security, University of Illinois at Urbana-Champaign
ACO	NATO Allied Command Operations
ACT	NATO Allied Command Transformation
B	Billion
Btu	British Thermal Unit
CT	Counter Terrorism
DE	Defense Expenditures
DRR	Defense Requirements Review
EIA	Energy Information Agency, Washington
EU	European Union
GDP	Gross Domestic Product
IFOR	NATO Implementation Force, Bosnia
IIG	Interim Iraqi Government
IISS	International Institute for Strategic Studies, London
INSS	Institute for National Security Studies, US Air Force Academy
ISAF	International Security Assistance Force, Afghanistan
K	Thousand
KFOR	NATO Kosovo Force
LNG	Liquefied natural gas
M	Million
MER	Market Exchange Rates
MND	Multinational Division, Polish-led in Iraq
NAC	North Atlantic Council
NATO	North Atlantic Treaty Organization
NC3A	NATO Consultation, Command and Control Agency, The Hague
NTM-I	NATO Training Mission-Iraq
OECD	Organization for Economic Cooperation and Development
OPEC	Organization of Petroleum Exporting Countries
PCC	Prague Capability Commitments
PE	Peace Enforcement
PPP	Purchasing Power Parity
PRT	Provisional Reconstruction Team
SACEUR	Supreme Allied Commander Europe
SFOR	NATO Stabilization Force, Kosovo
SHAPE	Supreme Headquarters Allied Powers Europe, Mons
SIPRI	Stockholm International Peace Research Institute

TEDC	NATO Training Education and Doctrine Center, Iraq
UAE	United Arab Emirates
UK	United Kingdom
UN	United Nations
UNAMI	UN Assistance Mission Iraq
WEU	Western European Union
WMEAT	World Military Expenditures and Arms Transfers

Prominent Terms[1]

Associated natural gas	That found with oil production
Battalion	A military unit used for ground operations. In NATO force planning, a generic battalion has 750 troops
Capability	The ability to execute a specific course of military action. Components include force structure, modernization, readiness, and sustainment
Demand	Desire for a commodity; here, interchangeable with the terms "consumption" and "petroleum products supplied"
Energy security	The strategic impact of natural resources on international relations
Fluid fossil fuels	Oil and natural gas. This report deals specifically with unrefined products--crude oil and natural gas liquids
Gross Domestic Product	The measure of national economic output (goods and services) over time. Calculations generally use constant currency figures over a specified period. For this report, unless otherwise noted, constant US dollars will be used
Hard power	The ability to coerce, which grows out of a country's military or economic might
Interoperability	The ability to accept, exchange, or use so as to increase operational effectiveness
Joule	The meter-kilogram-second unit of work or energy; equal to the work done by a force of one newton when its point of application moves through a distance of one meter in the direction of the force
Liquefied Natural Gas	Natural gas (primarily methane) that has been altered to a fluid state (for transportation and storage) by reducing its temperature to -260 degrees Fahrenheit at atmospheric pressure
OECD Europe	A convention used in some data sources, which separates out European nations of the OECD. Includes 22 of the 30 members, 17 of which are also in NATO
Operational level of war	One of three levels of military conflict; this level seeks to obtain strategic objectives within a theater of combat. Here, this would pertain to the Persian Gulf region
Out of area operations	Formal NATO military action in territories beyond those listed in Article 6 of the North Atlantic Treaty
Persian Gulf region	The territory and nations surrounding the body of water

	northeast of the Arabian Peninsula. This includes Iran, Iraq, Kuwait, Saudi Arabia, Qatar, Bahrain, and the United Arab Emirates
Petroleum	A mixture of liquid hydrocarbons, naturally occurring in sedimentary rock. Included in this broad category are crude oil, lease condensate, unfinished oils, and refined products obtained from the processing of crude oil and natural gas liquids
Renewables	Energy resources that are naturally replenishing but flow-limited. They are virtually inexhaustible in duration, but limited in the amount of energy that is available per unit of time
Risk premium	Crude oil price increase due to uncertainties, which is passed from producers to consumers
Scenario	A thought construct used for military planning, with the purpose of deriving force requirements
Soft power	The ability to attract, which arises from the appeal of a country's culture, political ideals, and policies
Sustainment	The ability to maintain the necessary level and duration of operational activities to achieve a military objective
Transformation	Induced change

Notes

[1] These are the working definitions used in this report. The majority come from three sources: International Energy Agency and Eurostat, *Energy Statistics Manual* (Paris, OECD, 2004); US Department of Defense Joint Publication 1-02, *Dictionary of Military and Associated Terms*, (as amended 9 June 2004), http://www.dtic.mil/doctrine/jel/doddict/; and the US Department of Energy, Energy Information Agency, *Energy Glossary*, http://www.eia.doe.gov/glossary/glossary_main_page.htm. The terms soft and hard power come from Joseph Nye, *Soft Power*: *The Means to Success in World Politics*. (New York: Public Affairs), 2004.

With its NATO Allies, the US is part of the world's most effective permanent coalition. A group of countries that share values, which share a determination to defend them, and who share the capability to defend them, wherever and whenever required. In an increasingly volatile world, that mutual commitment and robust capability is something precious. It must never be taken for granted. It must be preserved. It must be strengthened.

NATO Secretary General Jaap de Hoop Scheffer
Speech in Washington, 29 January 2004

Chapter 1

Introduction

I must stress to you today: time is of the essence. There is a real battle in Iraq today. Delays measured even in hours and days can cost lives.
Interim Iraqi Prime Minister Ayad Allawi
Address to the North Atlantic Council, 5 November 2004

OVERVIEW

Iraq hangs in a balance. The situation is promising or tragic, depending upon how one interprets the following facts. International donors offered thirty-four billion dollars in grants and loans at the Madrid Conference in October 2003, yet the World Bank estimates this as two billion short of the country's reconstruction needs.[1] The Iraqi armed forces and National Guard grew from zero in mid-2003 to almost sixty thousand in early-2005, yet remains almost forty thousand soldiers below the stated goal. The country now has over eighty thousand police--ten times the immediate postwar level--yet in the same period there have been thirty thousand crime-related deaths, over two hundred mass casualty bombings, and almost two hundred kidnappings. The total number of Iraqi security forces with combat capability has increased eighteen-fold since May 2003, yet it is still only halfway to its goal.[2] The view from outside Iraq is dichotomous.

Inside Iraq, there is a mix of optimism and fear. Almost eight and a half million Iraqis voted in elections on 30 January 2005, the first such process in the history of the country. One month before, potential voters were asked a simple question: is the country headed in the right or wrong direction? Almost half said the right direction, and their primary reason was the emergence of democracy. Almost forty percent said the wrong direction, and their overwhelming reason was the poor security situation.[3] Democracy and security will go hand in hand in Iraq. The future of the country will depend on what occurs next. The United Kingdom's Royal Institute of International Affairs issued a report in September 2004 which described three scenarios for the near future of Iraq: fragmentation, holding together, and regional remake.[4] There are tremendous implications for any of these possibilities, for Iraq, for the Middle East, and for the world. Nations have taken notice, and significant efforts have been made to positively influence the situation. But, more direct and dangerous action will be needed by soldiers on the

ground. And, the task will be long-term, with low-end estimates about the troop commitments ranging from five to ten years.[5]

For this, NATO offers the only truly viable international force that could be used. Should it choose, only NATO has the necessary forces, transport, command structures, and international unity to act in a resolute and cohesive manner in Iraq. The Iraqi leaders know this, and have already gone to the Alliance seeking its help. On 22 June 2004, one week before the transfer of power from the US-led Coalition to the Interim Iraqi Government (IIG), the interim Iraqi Prime Minister, Ayad Allawi, requested formal NATO involvement. Specifically, Allawi stated the following goals for his country:

- To become a modern, responsible and peaceful democracy
- To lead the troubled Persian Gulf region down the path of democracy and human rights
- To enhance security on NATO's southern flank[6]

In July 2004, sixteen NATO nations were contributing forces to the Coalition in Iraq. Both the UK and Poland commanded major units in the southern portion of the country. The UK-led division, based in the southeast, was composed almost entirely of NATO nations (with troops from the Czech Republic, Denmark, Italy, Lithuania, the Netherlands, Norway, Portugal, and Romania). The Polish-led division, in the central-south, included forces from Bulgaria, Denmark, Hungary, Latvia, the Netherlands, Norway, and Slovakia. Estonia had forces in Baghdad and Al-Nasiriyah.[7] Recent numbers for Coalition troop contributions coming from NATO nations were:

Table 1.1 Coalition Troops Serving in Iraq from NATO Nations

	November 2004	March 2005
Estonia	55	55
Czech Republic	92	110
Lithuania	105	120
Slovakia	105	105
Latvia	120	122
Portugal	120	0
Norway	150	10
Hungary	300	0
Bulgaria	455	450
Denmark	510	496
Romania	730	730
Netherlands	1,263	~600
Poland	2,400	1,700
Italy	2,700	3,085
UK	8,530	8,761
US	138,000	142,000

Sources: Data complied from Reuters News Reports and the following websites, http://www.globalsecurity.org and http://www.brooking.edu/iraqindex. There are slight disagreements between some of these sources

But, with one exception, participation of these forces came through bi-lateral negotiations between the United States and the sending country. They were there as individual nations, a "coalition of the willing," not as part of any formal alliance. The one exception was NATO support of the Polish-lead division. Poland requested NATO assistance and, since late 2003, the Alliance has provided this unit with communication, logistics and several other support activities.[8]

As will be described, a unified NATO position has recently emerged and the Alliance has now begun to formally contribute forces inside Iraq. This is an excellent start, but only just that. As of February 2005, there were 180,000 international soldiers in Iraq; those serving under the NATO flag amounted to 0.0017 percent.

In the past two years, twelve previous members of the Coalition have pulled their forces out of Iraq. Several more have announced that they are withdrawing at least a portion of their soldiers by the end of 2005. Included among them are Italy, Poland, Ukraine, Bulgaria, the Netherlands--five of the top thirteen contributors.[9] The number of non-US Coalition troops in Iraq has remained twenty-one to twenty-six thousand, but manpower challenges are coming this year.[10]

This report will advocate that NATO should play a much larger role in Iraq. More specifically, the Alliance should formally assume command and commit troops to the central-south portion of the country, in the five provinces now in the Polish sector. This report will analyze political, economic, and military components to present a case for this expanded mission. The thesis of this report is that the NATO Alliance has the resources, capabilities, and interests to conduct an expanded mission in Iraq.

4

SCOPE AND PURPOSE

Iraq is not a new issue at NATO Headquarters, but our interest is with the post-invasion period beginning 1 May 2003.[11] The build up to the war, and its conduct, was extremely stressful on NATO. Tension and animosity were rampant. As the new Secretary General announced in early 2004, during one of his first speeches: "I know that NATO has had a bruising year. The Iraq War sparked very strong debate even amongst the closest friends and allies, including in the UN and the European Union. And NATO didn't escape the fallout." But, he then added an important point: "My message is simple: it's time to get back to business."[12] This report is an attempt to do just that. It seeks to promote multilateralism, to identify common issues and interests, and to seek collective action. A unified, meaningful NATO commitment is the goal of this study.

This report can best be described as an "if, then" persuasive argument. The assumption is that, at some point, NATO will make a decision. This report begins with politics, to establish the context of the analysis. Politics sets the stage, and it is important to examine the mechanisms of NATO decision-making and present previous decisions on Iraq made by the Alliance. But, politics and probabilities are not the focus here. This is not an attempt to revisit the political wounds of the Iraq War, nor to contest national positions during that conflict. The purpose here is to further the debate about multilateral action in a NATO context. Should the Alliance decide to intervene in Iraq, this report will describe how that could be accomplished.

This report centers on issues of "hard power," a term defined by Joseph Nye as the ability to coerce, which springs from military and economic might.[13] For both of these elements, strategic policies and implications will be examined. For military matters, this report concentrates on capabilities and forces in being among members of the NATO Alliance. The economic facets of this report will focus on fluid fossil fuels, specifically oil and natural gas. Other forms and facets of power certainly weigh heavily in international affairs, but those are beyond the scope of this study. Here, the focus is on direct, forceful, quantifiable means that can be used by a nation or an alliance to influence international events. As Nye states, "Hard power remains crucial in a world of states trying to guard their independence and security while other non-state groups remain willing to turn to indiscriminant violence."[14]

The table of contents reveals the framework for this report. It is a fusion of political science, economic analysis, military history, defense studies, force planning, and regional studies. Each discipline contributes to the argument, although none will be dominant. Some readers may desire a more thorough approach to certain areas, but the depth of this analysis is appropriate for the thesis. This is only a topical assessment and, as such, will draw widely upon relevant sources of information.

RESEARCH LIMITATIONS

This report is entirely unclassified. Every portion of this study drew from readily available, open, public sources. Documentation is provided to prove the location of this information.

The situation in Iraq changes often, and there were major events throughout the lifecycle of this study. Since the summer of 2004, there has been a power transfer to the IIG, an Iraqi request for NATO assistance, a US Presidential election, an Iraqi election, NATO troops deployed to Baghdad, and a new government was formed in Iraq. Numbers, concepts, and commitments have changed on a weekly basis. Every attempt has been made to offer relevant, current and accurate facts. Text and footnotes offer specific dates for the figures and evidence, to show the reader the timeframe for the data presented. Additionally, the sources that were used are updated regularly, so the reader may directly consult the documentary evidence for more recent and specific information. This topic is very current and the data timely. Because of that, however, much of what follows contains highly perishable information.

METHOD OF PRESENTATION

This report separates into thematic sections. The following is a brief description of later chapters, to show the overall outline and goals for each part of this work.

Chapter Two, "Political Context," serves as a framework for this report. It begins by examining the principle of NATO consensus, under which all Alliance decisions are made, and presents key portions of the NATO Charter that affect this issue. Next, it discusses the debate and policies surrounding NATO actions beyond the European area of responsibility, and decisions that the Alliance has made concerning Iraq. The aim is to show that NATO documents, policies, and rhetoric advocate a more substantial role in Iraq.

Chapter Three, "Energy Resource Analysis," provides an economic assessment to show the importance of liquid fossil fuels. Economic terms are defined, and production figures presented. Next, consumption figures are shown for NATO nations, to illustrate the prominence of the Persian Gulf to the economies of Alliance members. Prices will be examined, to show the effect of instability on world energy markets. As will be shown, most European nations have a crucial reliance on this region's energy resources.

Chapter Four, "NATO Military Assessment," examines the martial dimension of the twenty-six-member Alliance. It begins with an analysis of military budgets and forces, to show that NATO has the military capability to participate more extensively abroad. Recent and ongoing NATO operations are briefly listed, to show that NATO--should it choose--could perform expanded military missions in Iraq.

Chapter Five, "Conceived NATO Missions in Iraq," describes potential NATO operations in the country and details military requirements that might be necessary. This is an outline of the NATO process for determining requirements. The purpose is to briefly show the methodology to develop detailed figures, so that the Alliance can know the level of commitment which might be necessary to fulfill larger military tasks in Iraq.

Chapter Six, "Consequences and Implications," starts by briefly examining the possibility of this NATO mission occurring. It then provides a summary, which ties together the separate elements of the study and consolidates the major themes.

Notes

[1] Beyond this, the US General Accounting Office has itemized an additional $19.44B of areas not covered in the World Bank estimate. US General Accounting Office, *GAO-04-902 R: Rebuilding Iraq*, June 2004.

[2] An excellent data source is Michael E. O'Hanlon and Adriana Lins de Albuquerque, The Brookings Institution, *Iraq Index: Tracking Variables of Reconstruction & Security in Post-Saddam Iraq*, http://www.brookings.edu/iraqindex. (Hereafter, Brookings, *Iraq Index*). Accessed 12 April 2005.

[3] Survey conducted 26 December 2004 to 7 January 2005 by the International Republican Institute, cited at http://zogby.com/news/ReadNews.dtm?ID=957, version 4 February 2005.

[4] The organization is also known as Chatham House, *Iraq in Transition: Vortex of Catalyst?* Briefing Paper, Middle East Programme BP 04/02, September 2004.

[5] Chatham House, *Iraq in Transition: Vortex of Catalyst?* Briefing Paper, Middle East Programme BP 04/02, September 2004; *Chicago Tribune*, "General Projects Long-Term Iraq, Afghanistan Presence," 14 April 2005; *Philadelphia Inquirer*, "US Faces Tough Options In Quest for a Stable Iraq," 19 October 2004, p. 1.

[6] Speech by Dr Ayad Allawi, Prime Minster of Iraq at the North Atlantic Council Meeting, 22 June 2004, NATO On-line Library, http://www.nato.int/docu/speech/2004/htm

[7] Spanish troops were previously in Iraq, as well. The sixteenth NATO nation is the US. Nations and locations from Public Affairs, Secretary of the Air Force, *US Air Force Aim Points*, 20 July 2004. See also, NATO Press Release (2003)93, 3 September 2003.

[8] Poland requested NATO assistance on 21 May 2003, and assumed command of the division on 3 September 2003. NATO had also helped with force generation and unit movement. See "NATO and the 2003 Campaign Against Iraq," http://www.nato.int. This will be discussed more fully in Chapter Two.

[9] For a detailed list of Coalition nations, troops, and units, see the following website, which is updated regularly: http://www.globalsecurity.org/military/ops/iraq_orbat_coalition.htm

[10] Brookings, *Iraq Index*, accessed 11 April 2005.

[11] A search of NATO on-line records shows Iraq mentioned as early as 1959, when Iraq pulled out of the Baghdad Pact and the Central Treaty Organization (CENTO). There are also NATO document references during the Iran-Iraq War from 1980 to 1988. Repeatedly, from 1996 to 1998, the NATO Secretaries General made admonishments

Notes

towards Saddam Hussein over troubles with weapons inspections in Iraq.   For examples, see NATO Press Releases from 3 September 1996, 25 February 1998, 4 March 1998, and 17 December 1998, all found on www.nato.int/docu. An interesting view can be found in a Political Committee report from the NATO Parliamentary Assembly in 1998, which talks about the potential application of Article 4 of the NATO Charter, and varied responses from NATO nations towards Iraq. See Karsten Voight, General Rapporteur, "The Transatlantic Agenda and the New NATO," section II, "The West and Iraq," pp. 2-4, November 1998, www.nato-pa.int/archivedpubs/comrep/1998. The NAC also issued a formal statement on Iraq at the 2002 Prague Summit, stressing full support for UN Security Council Resolution 1441 and seeking Iraq's compliance. See NATO Press Release (220) 133, 21 November 2002.

[12] Speech by Secretary General Jaap de Hoop Scheffer at the US National Defense University, Washington, DC, 29 January 2004. http://www.nato.int/docu/speech/2004/s040129a.htm

[13] In fact, Nye defines this phrase en route to describe and emphasize its opposite, soft power--the ability to attract, which arises from the attractiveness of a country's culture, political ideals, and policies. Joseph Nye, *Soft Power*, pp. x, 2, 5.

[14] Nye, *Soft Power*.

Chapter 2

Political Context

We, the Heads of State and Government of the nations of the Atlantic Alliance, meeting in Istanbul, declare our full support for the independence, sovereignty, unity, and territorial integrity of the Republic of Iraq and for strengthening of freedom, democracy, human rights, rule of law and security for all the Iraqi people.

Statement issues by the North Atlantic Council
Istanbul Summit, 28 June 2004

This chapter presents the NATO political context, to bound the report topic and shows the mechanisms to implement its recommendations. The purpose here is to briefly explain the diplomatic machinations required for NATO decision-making, present applicable passages of NATO documents, and assess decisions made thus far towards intervention in Iraq.

The thesis of this chapter is that the NATO charter, policies, and statements reveal common interests and commitments, which support the possibility of an expanded Alliance mission in Iraq. NATO rhetoric calls for greater action in that country.

NATO CONSENSUS

NATO was founded in 1949, with the signing of the Washington Treaty by the twelve original members. The title, "North Atlantic," was carefully chosen to reinforce the bond between Europe and North America.[1] The stated purpose of the Alliance is to safeguard the freedom and security of all its members in accordance with the principles of the United Nations (UN). Specifically, Article 51 of the UN Charter proclaims the rights of nations to individual and collective self-defense.[2] Since inception over half a century ago, the Atlantic Alliance has had five rounds of enlargement and currently contains the following members:

Table 2.1 NATO Accession Dates

1949	Belgium, Canada, Denmark, France, Iceland, Italy, Luxembourg, Netherlands, Norway, Portugal, United Kingdom, United States
1952	Greece, Turkey
1955	Germany
1982	Spain
1999	Czech Republic, Hungary, Poland
2004	Bulgaria, Estonia, Latvia, Lithuania, Romania, Slovakia, Slovenia

Note: Originally just the Federal Republic of Germany. The formal unification of Germany occurred in August 1990, and both former parts then became NATO members as a single entity.

Altogether, twenty-six nations. The longest and most successful alliance of the modern age.

The NATO organization gives equal voice to each member nation. This is profound, for the size of economies, populations, and military forces vary widely among the allies. Some figures will illustrate the extent of these disparities:

Table 2.2 Variance Among NATO Members

	High nation	Low nation	Ratio
GDP (B US $)	$10,400 (US)	$6.3 (Estonia)	1,651: 1
Population (K)	289,696 (US)	285 (Iceland)	1,016: 1
GDP/capita (K)	$53,795 (Luxemburg)	$2,021 (Bulgaria)	27: 1
Active Duty Military (M)	1.427 (US)	0 (Iceland)	n/a

Source: Data from IISS, *Military Balance, 2003-2004*.
Notes: Figures in constant 2002 US dollars. Iceland has no military forces.

The third column shows the ratios: the US, for instance, has a population just over one thousand times that of Iceland. Politically, though, as Alliance members around the table, all NATO nations are equal.

NATO is not a supranational organization, such as the European Union (EU). The Atlantic Alliance is intergovernmental, and thus guided by its component parts. It is an organization comprised of independent sovereign states.[3]   Each member nation is represented by a permanent delegation at NATO Headquarters in Brussels, Belgium. There are two types of representatives, a civilian diplomat known as the Permanent Representative (who is the formal head of the delegation) and a Military Representative. Each of these officials has a staff of civil and military advisers, which represents the nation on a variety of panels, groups and committees across the Alliance. Additionally, the headquarters has separate organizational structures supporting the political and military elements of the Alliance. Both structures support the North Atlantic Council (NAC), the highest decision making body within NATO. The NAC is a political forum; it does not direct the nations, but rather serves as a platform for the airing of national

views, perspectives, policies and opinions. The NAC can convene with any of four different national representations: Permanent Representatives (the routine, once a week), foreign ministers, defense ministers, or heads of state. The latter is the highest level, and it meets for major NATO Summits, such as Istanbul in June of 2004.

There is no formal voting process within the Alliance. The "NATO method" of consultation is to meet until an agreement can be brokered, then seek unanimity on the text of a position statement. This all-or-nothing approach often leads to delay and frustration for some nations, but when a decision finally does emerge it has great sway. The strength of each member nation is thus combined into a unified consensus for the entire Alliance.

Coordinating twenty-six nations is daunting. To alleviate this, political consultation is continuous within the halls of NATO Headquarters. Nonetheless, disagreements are common, and quarrels among members often rife. But, this is by design, and ensures all nations are heard. In a recent book on the history of the Alliance, a prominent NATO scholar concludes: "tensions and frictions were built into NATO by virtue of a free association of its component parts."[4] Lord Carrington, Secretary General of the Alliance from 1984 to 1988, was fond of saying that NATO sang in harmony, not in unison.[5] Consensus, when reached, is thus all the more powerful.

NATO CHARTER

The NATO Charter, also known as the North Atlantic Treaty or the Washington Treaty, was conceived as a threat-based document, focused on the risk of a Soviet invasion. The applicable coverage zone originally included North America, Western Europe, and colonial holding of member nations.[6] As will be shown in the next section, by practice and principle the stated coverage area has expanded. However, this founding document resonates today due to the underlying principles that it proclaims. The area may have broadened, but the tenets still call for a unifying purpose. The preamble, ratified by the governments of all member nations and signed by their representatives upon accession, states:

> The parties…are determined to safeguard the freedom, common heritage and civilization of their peoples, founded on the principles of democracy, individual liberty and the rule of law. They seek to promote stability and well being *in the North Atlantic area*. They are resolved to unite their efforts for collective defense and for the preservation of peace and security.[7]

The NATO Charter consistently calls for individual and collective action from its members.[8] Article 2 states that "the parties will contribute toward the further development of peaceful and friendly international relations by strengthening their free institutions, by bringing about a better understanding of the principles upon which these institutions are founded, and by promoting conditions of stability and well being." It specifically cites economic interests, calling for elimination of conflict with international

economic policies and encouraging economic collaboration. Article 3 calls for "continuous self help and mutual aid," so as to maintain and develop the capacity to resist armed attack.

Article 4 directs consultation, whenever "in the opinion of any of them, the territorial integrity, political independence or security of any of the Parties is threatened." An interpretation of this article during the 1949 signing of the Treaty concluded that "security" had no boundaries, and that consultations would apply "to any part of the world."[9] A further, formal elaboration was made by the NAC at the 1982 Bonn Summit, and this statement will have implications later in this report:

> Our purpose is to contribute to peaceful progress worldwide…All of us have an interest in peace and security in other regions of the world. We will consult together as appropriate on events in these regions which may have implications for our security…Those of us who are in a position to do so will endeavor to respond to requests for assistance from sovereign states whose security and independence is threatened.[10]

Article 5 is the pivotal text, and warrants a full listing:

> The Parties agree that an armed attack against one or more of them in Europe or North America shall be considered an attack against them all and consequently they agree that, if such an armed attack occurs, each of them, in exercise of the right of individual or collective self-defense recognized by Article 51 of the Charter of the United Nations, will assist the Party or Parties so attacked by taking forthwith, individually and in concert with the other Parties, such action as it deems necessary, including the use of armed force, to restore and maintain the security of the North Atlantic area.
>
> Any such armed attack and all measures taken as a result thereof shall immediately be reported to the [UN] Security Council. Such measures shall be terminated when the Security Council has taken the measures necessary to restore and maintain international peace and security.[11]

Several relevant points emerge. The text envisaged protection of Europe from Soviet attack, but the first invocation of this article occurred following terrorist attacks in North America. The phrase "as deemed necessary," at the end of the first paragraph, allows each nation to decide its response. No automatic recourse is directed, so as to avoid a tripwire mentality among members. Each nation, each government, will decide how best to respond, if at all. As written, the Alliance could move forward collectively, even without active military participation from each of its member nations. And, in a nod to international stability, the treaty specifically mentions the United Nations: NATO is to terminate hostilities when the UN Security Council restores peace and security. This is an aspiration, a hopeful gesture that the UN (then merely a fledgling organization, founded in 1945, only four years prior to the Washington Treaty) could actively and forcefully fulfill worldwide responsibilities.

OUT OF AREA CONCEPT

With the end of the Cold War, NATO sought to reinvent itself. The central threat that guided Alliance decisions since inception was removed, and some members began to actively consider a wider view of NATO's role in the world. Threats had previously driven NATO's strategic thinking and defense planning, and these were slowly replaced with other conceptual templates, to allow the Alliance to focus its resources more precisely. As early as 1991, the year after the reunification of Germany, NATO leaders began to consider the possibility of NATO activities beyond the formal boundaries of the Washington Treaty. This issue became known as "out of area" operations. In a NATO context, the phrase has particular meaning: formal Alliance military action in territories beyond those listed in Article 6.[12]

Initially, the crises that would warrant NATO action were on the fringes of Alliance territory, still in Europe but beyond the precise terms of Article 6. In 1995, NATO led the Implementation Force (IFOR) in Bosnia. In 1999, NATO led the Stabilization Force (SFOR) in Kosovo. That same year, the Alliance also approved a new Strategic Concept.[13] In that document, security risks to the Alliance were described as "multi-dimensional and difficult to predict." Five fundamental security tasks were defined, two of which pertain directly to issues developed later in this report. The following two items are from the 1999 NATO Strategic Concept, which is still the current guiding document:

- Deterring and defending against any threat of aggression against any NATO member state
- Contributing to effective conflict prevention and engaging actively in crisis management

Further elaborating on this document, the NATO Public Diplomacy Division (using words and concepts similar to those seen in the Rome Declaration) writes, "Alliance security has to take account the global context and could be affected by wider risks, including acts of terrorism, sabotage, organized crime and the disruption of the flow of vital resources."[14]

Throughout the 1990s, the NATO out of area concept was reiterated and practiced in bordering areas, but there was not yet a compelling reason for the Alliance to face the prospect of engaging in operations beyond the immediate vicinity of NATO boundaries. That was to change on 9/11.

At a special meeting on the evening of 11 September 2001, the NATO allies declared their support and offered their assistance to the United States. The Secretary General at the time, Lord Robertson, called for the members "to unite their forces in fighting the scourge of terrorism."[15] The next day, the NATO nations unanimously declared that if the 9/11 attacks were deemed to be from abroad, Article 5 would be in effect. On 2 October 2001, US officials presented the evidence of the attacks, which concluded that the *al-Qaida* terrorist network was responsible, thus formally invoking Article 5. Two days later, the Allies agreed to a series of measures to assist the US campaign against

terrorism, including legal, financial and military assistance.[16] As one NATO ambassador stated as the time, resistance to out of area operations came down with the Twin Towers.[17]

Formally, though, the North Atlantic Council ended the debate on out of area operations in May 2002, at the Reykjavik Summit. [18] The final communiqué from the meeting states:

> We reiterate our determination to combat the threat of terrorism for as long as necessary. There is no justification for terrorist actions. In keeping with our obligations under the Washington Treaty we will continue to strengthen our national and collective capacities to protect our populations, territory and forces from any armed attack, including terrorist attack, *directed from abroad*…to carry out the full range of its mission, NATO must be able to field forces that can move quickly *to wherever they are needed*, sustain operations over distance and time, and achieve their objectives.[19]

As Lord Robertson recounted, the Reykjavik Summit "put an end to the decade's long wrangling over the theology of out of area operations."[20] To affirm this decision, in the summer of 2003 NATO formally assumed command of a portion of the international force in Afghanistan and began to assist Poland with preparations for that country's command of a multinational division in central-south Iraq.

DECISIONS ON IRAQ

In May 2003 the Polish government requested NATO assistance with preparations for its leadership role of the multinational stabilization force in Iraq. On 21 May, the NAC agreed to this and, in turn, asked NATO military authorities to provide a list of tasks that was needed and could be performed by the Alliance. In this capacity, the Supreme Headquarters Allied Powers Europe (SHAPE) was directed to work with Polish authorities to define military requirements and examine how the Alliance might help to satisfy them. The NATO military staffs did this, and on 2 June the NAC agreed to support Poland with force generation, communications, logistics, and movements.[21]

A force generation conference was then held at SHAPE and Alliance members committed their troops and equipment to the mission. The Deputy Supreme Allied Commander (SACEUR) chaired the conference, and concluded: "With the great support of NATO and its partner nations, I am very glad to be able to provide capable forces and necessary arrangements to Poland to enable the commander in theater to fulfill a difficult task."[22] Lord Robertson sought to underscore NATO's role and link Iraq to the wider issue of terrorism:

> [T]he Alliance's support for Poland in Iraq demonstrates the important contribution NATO is making to stability and crisis management and the fight against terrorism. The contribution will help ensure that we defeat the men of

violence who seek to undermine the return to stability so much desired by the people of Iraq. NATO deplores both the attack on the international community in the UN headquarters and the indiscriminate attack on innocent Iraqi people in Najaf. In neither case will terrorists succeed in their callous aims.[23]

As always, the NAC was unanimous on this matter, but looking closer, limits can also be seen. As presented, the task was not to help the United States, but help Iraq. This is a key distinction. The text on the official NATO website reads, "NATO is helping Iraq provide for its own security by training Iraqi personnel and supporting the development of the country's security institutions." And, this assistance is purely advisory, for "NATO is involved in training, equipping, and technical assistance--not combat."[24] With assistance from the NATO Alliance, Poland formally assumed command of a division in Iraq on 3 September 2003.

Nine months passed, with no change to NATO's involvement. But the next summer, the Alliance took a number of steps to increase its participation in Iraq and formalize its role in the rebuilding of the nation. The Istanbul Summit of June 2004 was the first involving heads of state and government since the 2002 Prague Summit. Iraq was a major point of discussion, and consensus was reached on a number of issues. On 28 June, the Alliance issued a formal statement on Iraq. The complete text is reprinted in the appendix, and several items warrant further discussion. The first paragraph, reprinted at the start of this chapter, set the tone for NATO unanimity and participation. The remaining text shows NATO's support for the Polish Division as clear and firm, and also mentions the UN authority under which this unit operated. Subsequent paragraphs further outline NATO decisions on its support:

> We are united in our support for the Iraqi people and offer full cooperation to the new sovereign Interim Government as it seeks to strengthen internal security and prepare the way to national elections in 2005…we have decided today to offer NATO's assistance to the government of Iraq with the training of its security forces.[25]

Member nations were then urged to contribute to this training mission. Details were to be developed "on an urgent basis" with the Iraqi government, and "as a matter of urgency" recommendations were to be considered from the Secretary General on additional assistance that might be provided by the Alliance. Again, the issue of terrorism was linked to Iraq: "We deplore and call for an immediate end to all terrorist attacks in Iraq. Terrorist activities in and from Iraq also threaten the security of its neighbors and the region as a whole."[26]

Things then happened quickly. Shortly thereafter, a NATO "fact finding" team went to Iraq, to examine the potential operating area and discuss how to integrate this future NATO mission within the Coalition.[27] A report was prepared, and recommendations put to the NAC for consideration. During this time, the Foreign Minister of Iraq, Hoshyar Zebari, visited NATO Headquarters to meet with the Secretary General and to address the NAC.[28] On 30 July, the NAC approved the recommendations of the fact-finding team.

Two weeks later, on 14 August, the NAC agreed to establish (what was initially known as) the NATO Training Implementation Mission Iraq, with the task of training and mentoring senior-level staff officers from the Iraqi security forces. The team, consisting of about fifty NATO officers, would be based in Baghdad. Over the next three months, further military plans were drawn up and approved for this NATO mission in Iraq.[29]

A major issue of debate was the command lines for this NATO mission. Eventually, consensus was reached and Lieutenant General David Petraeus, US Army, was designated as the commander of the mission. In this capacity, he would be dual-hatted, meaning he would retain his US duties as commander of the Multinational Security Transition Command Iraq, as well as fulfill duties in a NATO capacity as commander of the NATO training mission. In a NATO role, Petraeus would report up the chain to SACEUR, and ultimately, the NAC. This was a change from the NATO command lines in Afghanistan, where there were originally two separate chains and NATO responsibilities did not rest with a dual-hatted general officer.[30]

Progress continued. The interim President of Iraq, Sheikh Ghazi Al-Yawar, visited NATO Headquarters on 14 September to thank the Alliance for its pledges and request further assistance. On 8 October, the NATO Training and Equipment Coordination Group was established at NATO Headquarters to ensure member nations would complement each other in their assistance towards Iraq. Interim Prime Minister Allawi addressed the NAC on 5 November. He also thanked the Alliance for its commitments to Iraq, particularly with the training of security forces:

> I want Iraq's security forces to learn from the professionalism that NATO's forces are known for. I want them to learn and to apply standards of human rights that our region, sadly, is not known for, and I want NATO's help in creating the Command and Control structures that place the security forces where they should be: firmly under the control of a democratically-accountable civilian government.[31]

He spoke further of elections and the need for faster development of security forces, stressing that "we cannot afford to fail on either count." And then he, too, broadened the argument, to stress the international nature of the threat: "by 'we,' I do not mean Iraq alone. The nature of the terrorist threat is international. None of us in this room can afford for violence to defeat democracy in Iraq."[32] On 17 November 2004, the NAC unanimously approved the NATO Training Mission-Iraq (NTM-I, as it was then formally re-titled).

These Alliance commitments directly support the nation and people of Iraq. NATO members have come a long way since the fractious period of late 2002 and early 2003. Agreement, consensus, and support are clearly evident. But, there is more that could, and should, be done by NATO in Iraq. Subsequent chapters will examine economic, military, and solidarity issues which call for NATO to formally support and expand its operations in the country. Some of these matters concern individual NATO nations; others, the

collective Alliance. The next chapter touches upon both, and assesses the resources in the Persian Gulf and their importance to the economies of NATO nations.

Notes

[1] This wording also drew a distinction with the nascent Western European Union (WEU). The 1948 Treaty of Brussels established the WEU, which also claimed responsibility for defense and security matters.

[2] See appendix for complete text of Article 51.

[3] Concerning this point, the author had an interesting exchange with officials from a 2004 member nation during a pre-accession meeting. The talks concerned airfield modifications and were meant to be interactive. They began rather one-way, with NATO officials leading the discussion while the national representatives remained entirely quiet. The chief national official, who was a former Soviet military officer, was repeatedly prodded to participate, but did not. Finally, he asked the NATO officers to tell him exactly what they wanted, so his nation could respond. After a lengthy discussion, he was enlightened by the fact that "the nations are NATO." There would not be any direct tasking; requests, perhaps, but the decisions were up to the nation, not the Alliance. NATO could not, and would not, dictate policies or decisions on these matters.

[4] Lawrence Kaplan has written about NATO since 1954, and just finished his tenth book on the Alliance. He is the Emeritus Director of the Lyman Lemnitzer Center for NATO-EU Studies at Kent State University. Kaplan, *NATO Divided, NATO United: The Evolution of an Alliance*, (Westport, Conn; Praeger Publishers, 2004), p. 148. (Hereafter, referred to as Kaplan, *NDNU*.)

[5] Lord Robertson often quoted Lord Carrington on this point.

[6] The preamble uses the term "North Atlantic area," while Article 6 lists specific geographic territories and military operating areas covered by the treaty. See appendix for complete text.

[7] Italics added. NATO's expanded area of interest will be discussed in the next section. Washington Treaty, 4 April 1949. The treaty came into force on 24 August 1949, after the deposition of the ratification of all signatory states.

[8] See appendix for complete texts of NATO Articles 3 through 6.

[9] Alan K Hendrikson, "The Creation of the North Atlantic Alliance," *American Defense Policy*, 5th ed., (Baltimore; Johns Hopkins University Press, 1982), p. 310.

[10] Original text, Bonn Declaration of the Heads of State and Government, Meeting of the NAC, 10 June 1982, http://www.nato.int/docu/comm.

[11] Canadian diplomat Escott Reid famously dubbed this text "the pledge." Article 5, Washington Treaty, 4 April 1949.

[12] Used here, the term only includes military operations under formal NATO sanction. The Gulf War of 1991, which involved many NATO nations, does not fit this definition. Nor does the Iraq War of 2003. NATO out of area operations will be discussed more fully in Chapter Four, which will survey formal NATO actions from 1990-2004.

[13] The first NATO strategy was begun in October 1949, and was published as a classified document known as "The Strategic Concept for the Defense of the North Atlantic Area." The 1991 document (now called merely the Strategic Concept) heralded

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a new era, as it was issued as an unclassified document freely available. The titles alone show the shift in focus. For background, see *NATO Handbook*, Chapter 2: The Strategic Concept of the Alliance, available on-line at http://www.nato.int/docu/handbook/2001/index.htm.

[14] NATO Public Diplomacy Division, *NATO Transformed: Peacekeeping and Crisis Management*, (Brussels; NATO, 2004), p. 4. (Hereafter, NATO, *NATO Transformed*).

[15] NATO Update, 12 September 2001. See http://www.nato.int/docu/update/2001/0910/e0911a.htm

[16] NATO, *NATO Transformed*, 2004, pp. 5.

[17] The ambassador was not named. See remarks by NATO Secretary General, at the Clingendael Institute, "Global NATO?" 29 October 2004, NATO On-line Library, http://www.nato.int/docu/speech/2004/s041029a.htm, p. 3.

[18] For details of the Summit, see the NATO website, http://www.nato.int/docu/comm/2002/0205-icl/0205-icl.htm.

[19] Italics added by author. Final Communiqué, Ministerial Meeting of the NAC, Reykjavik, 14 May 2002. Complete text at http://www.nato.int/docu/pr/2002/p02-059e.html.

[20] "Building a Transatlantic Consensus," speech to the European Institute, Washington, DC, 20 February 2003. Text from http://www.nato.int/docu/speech/2003/s03022b.html

[21] See *NATO Update*, "NATO Council Makes Decision on Polish Request," 21 May 2003. Also see NATO Issues, "NATO and Iraq: How did this Policy Evolve?" at http://www.nato.int/issues, accessed 14 April 2004.

[22] Quote by Admiral Feist of the German Navy, "Plans for NATO Support to Poland's Iraq Mission Finalized," *NATO Update*, 30 June 2003.

[23] "Poland Assumes Command of Multi-national Division in Iraq with NATO Support," NATO Press Release (2003)93, 3 September 2003, http://www.nato.int/

[24] "NATO's Assistance to Iraq," *NATO Issues*, http://www.nato.int, last updated 16 December 2004.

[25] Statement on Iraq, issued at NAC meeting in Istanbul, 28 June 2004, http://www.nato.int/

[26] Ibid.

[27] There was some contention with the term used for this team. "Reconnaissance team" was suggested, but some nations felt this implied a commitment to follow-on activities. Personal interviews, NATO Headquarters, 15-16 November 2004.

[28] See Press Conference, NATO Headquarters, 13 July 2004 at www.nato.int/docu/speech/2004.

[29] In addition, the NAC agreed to expand this training beyond Iraq. Selected Iraqi security personnel attended formal training in Europe at the NATO Joint Warfare Center in Stavanger, Norway, and the NATO School in Oberammergau, Germany.

[30] For actual status, see "Enhancement of NATO Assistance to Iraq," NATO Update, 22 September 2004, http://www.nato.int/docu/update/2004. For background, see Interview with Lieutenant General David Petraeus and Major General Hilderink, NATO Press Point, 8 October 2004, NATO On-line Library, http://www.nato.int/docu/speech.

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For the changing status of the command lines, see "NATO Training Mission-Iraq," NATO Allied Joint Forces Command Naples Fact sheet, updated 12 January 2005, http://www.afsouth.nato.int/JFCN_Missions/NTM-I/Factsheets.   The NATO (peacekeeping) and US (counterterrorism) command lines in Afghanistan remained separate from 2001 to 2004, but the Alliance agreed to combine the two in February 2005. See "2 Afghanistan Missions to Merge," *International Herald Tribune*, 11 February 2005.

[31] Speech by Dr Ayad Allawi at the NAC meeting, 5 November 2004, www.nato.int/docu/speech/2004.

[32] Ibid.

Chapter 3

Energy Resource Analysis

With the end of the Cold War, a new world order is taking shape...But, whatever the evolution of the new international order, oil will remain the strategic commodity, critical to national strategies and international politics.[1]
Daniel Yergin
The Prize (1991)

This chapter deals with a term known as "energy security," defined here as the strategic impact of natural resources on international relations. As a recent RAND study notes, "After a period of relative neglect, energy security questions are fashionable again and, as in the past, much of the new debate turns on developments in the Middle East."[2] The premise of this chapter is that energy security is prominent and must remain a key consideration for NATO nations. Iraq and the Persian Gulf are strategically important to most members of the Alliance. Here, specific items will be presented to show what is at stake. But, it is recognized that this alone is not sufficient. Thus far, the situation in Iraq has not produced large unified action from the Alliance. Energy was not a *casus belli,* nor will it be presented as a primary justification for subsequent intervention. But certain economic elements do add to the overall premise of this report. And through an economic analysis one can see individual and collective interests that are at risk to NATO nations in Iraq and the greater Persian Gulf.

The chapter begins with an introduction to fluid fossil fuels, to define terms and concepts. Then, production and consumption of these resources will be examined to show their location, distribution, and resultant dependencies. The end of the chapter will examine the relationship between crises in the Persian Gulf and world energy prices. These analytical elements seek to reinforce the thesis of the chapter, that a stable Persian Gulf is important to NATO economies, particularly for nations in Europe.

FLUID FOSSIL FUELS[3]

Energy resources can be grouped into various categories. At the highest level, there are two basic fuel classifications: fossil and non-fossil. Fossil refers to the formation of these fuels, which occurred in the geological past from the decaying remains of living

organisms to form carbon-containing fuels.   The two classifications can be further subdivided, as depicted in the following energy tree:

Energy
```
                          Energy
                           /\
                          /  \
                         /    \
                    Fossil    Non-Fossil
                     /\          /\
                    /  \        /  \
                   /    \      /    \
```

Fluid	Solid	Nuclear	Renewable forms	
Oil	Coal		Biomass	Tidal
Natural Gas			Wind	Ocean thermal
			Hydro	Geothermal
			Solar	Wave action
			Tidal	
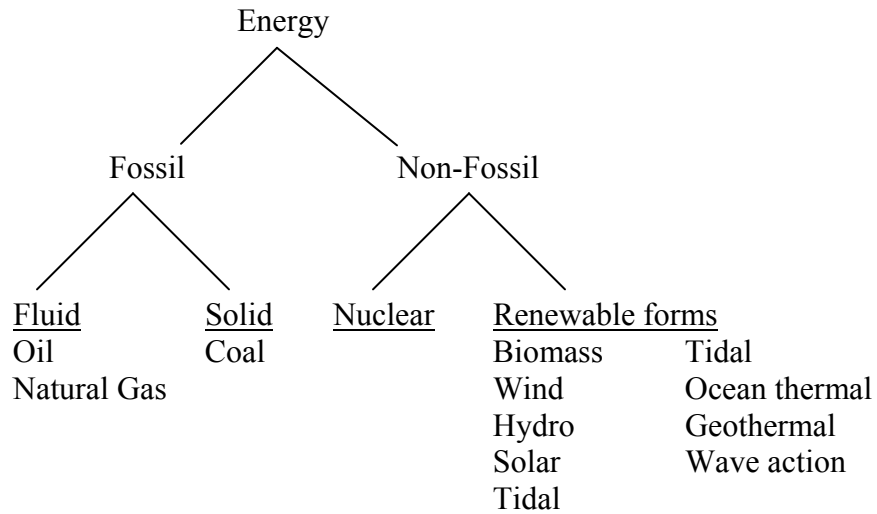
Figure 3.1 Energy Tree

Large-scale use of non-fossil fuels is relatively new, and these sources are still emerging as major energy forms. The following figure is from a research project at the University of Illinois, which has categorized and tabulated world energy consumption by fuel type. Assessments have been made for each fuel type, to show the resultant energy provided. Forms of energy can be compared, to show their relative consumption. The following is a graph covering the second half of the twentieth century:

World Energy Consumption by Fuel
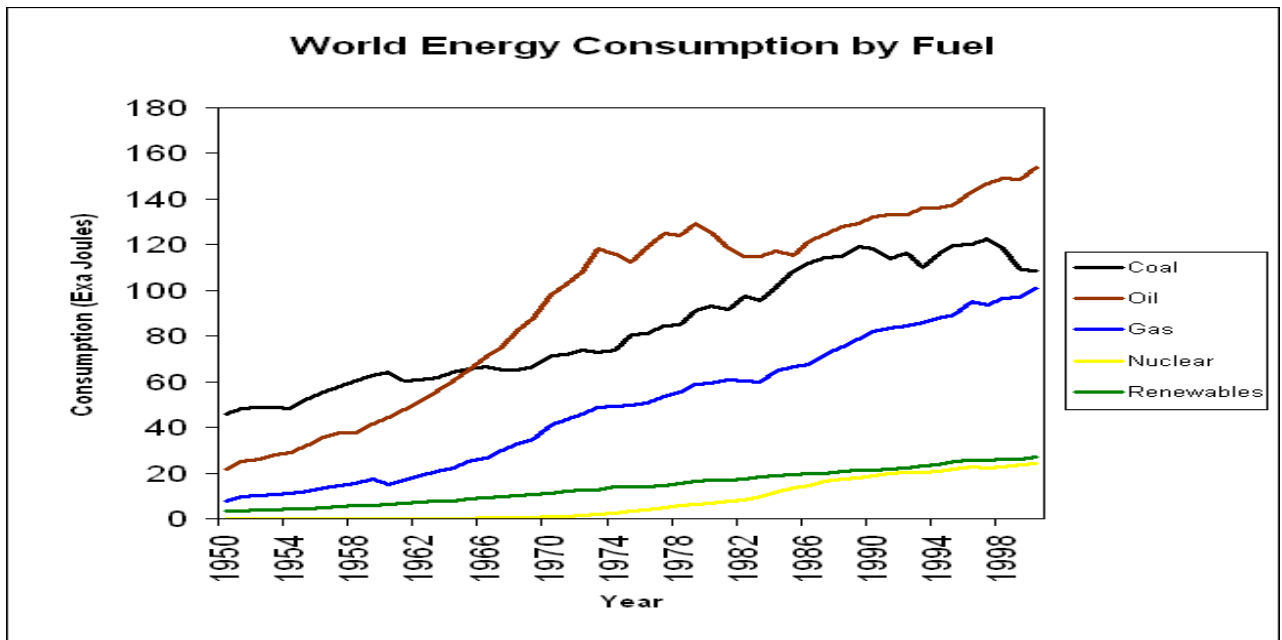
Figure 3.2 World Energy Consumption by Fuel Type, 1950-2000. From G.S. Rethinaraj and Clifford Singer, ACDIS Research Project, 2005. An exajoule is ten to the eighteenth power. See appendix for units.

Globally averaged rates of energy use have followed a general rule for the past half-century. During the 1970s, the ratios for oil, coal, natural gas and other was roughly 4:3:2:1. Thus, oil was predominant in the formative period of US energy security policy. Early in the new millennium, natural gas (shown as merely "gas" above) is forecast to overtake coal.[4] Fluid fossil fuels will remain dominant in the early twenty-first century. What follows is a discussion about oil and natural gas, the two fluid fossil fuels that will soon be the world's top two energy resources.

Fluid fossil fuels occur naturally in pools, which are found in underground reservoirs. These resources are the product of decomposition, compression and high temperatures.[5] The resulting fluid forms over the course of 100 million years, trapped within sedimentary rock (such as folds, salt domes, and shaped faults) and protected from evaporation by a layer of mineral strata. Chemically, fluid fossil fuels contain a complex mixture of liquid hydrocarbons (compounds containing hydrogen and carbon). These resources are collectively known as petroleum, from the Latin terms *petra* (rock) and *-oleum* (oil). The fluids can be extracted from the geological matrix with wells, in a process known a reservoir extraction.[6] Unrefined products come straight from the ground, and consist mainly of crude oil and natural gas liquids.[7]

The first oil well was drilled in 1859, in the US state of Pennsylvania, and for the next century the Western Hemisphere dominated the world's oil markets. But, this began to change in the middle of the twentieth century, when oil production became concentrated in other parts of the globe. Then, once again, oil became well suited to monopolization (as it had been before in the United States, until the breakup of Standard Oil in 1911).[8]

Reservoir concentration, economies of scale, and short-term elasticity of demand have all contributed to direct control by cartels, such as the Organization of Petroleum Exporting Countries (OPEC).[9]

Oil is the largest traded commodity in the world. Either as crude oil or refined products, demand for oil is growing in absolute terms. As a share of global total energy supply, however, oil has been steadily declining since the period of the 1973 OPEC oil embargo. In 1973, oil comprised forty-five percent of the world energy share; by, 2004, this had dropped to thirty-five percent.[10]

Natural gas found with oil production is known as "associated" gas. Generally, associated gas is also "wet," meaning it contains appreciable levels of butane or propane.[11] Until the 1970s, associated gas was usually burned at the extraction site, largely to avoid hazards and transportation costs. However, with further refinement, natural gas can become marketable in its own right. Unlike crude oil, natural gas sites (both wet and dry) are distributed much more evenly around the world. The challenge, though, is how to move this resource to markets. Pipelines can transport this resource in a gaseous state. Other transportation can be used if the physical state of the natural gas is changed, by reducing its temperature to -260 degrees Fahrenheit (-160 degrees Celsius) under atmospheric pressure. This condenses methane (CH_4), which is often over eighty-five percent of natural gas by weight. This liquefied natural gas (LNG) can then be placed on carriers, such as large ocean-going ships.[12]

Natural gas is a growth industry. In 1973, natural gas comprised sixteen percent of the global primary energy supply. By 2004, this share had climbed to twenty-one percent.[13]

PERSIAN GULF PROMINENCE

The body of water known as the Persian Gulf is six hundred miles long, and touches seven countries: Iran, Iraq, Kuwait, Saudi Arabia, Qatar, Bahrain, and the United Arab Emirates (UAE). These nations are central to any discussion about fluid fossil fuels.
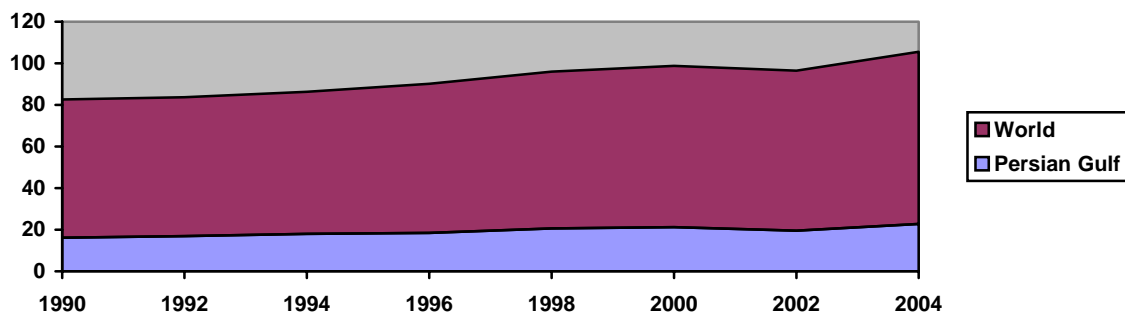
Figure 3.3 Oil Production, 1990-2004. Figures for 2004 derived from average production for first ten months. Data from US Energy Information Agency (EIA), *International Petroleum Monthly*, December 2004.

For the first ten months of 2004 the Persian Gulf accounted for 27.5% of the world's daily oil production. Even more important is the excess capacity in the region. Excess oil production allows the ability to flex, to expand to changing market demands or reduced

production elsewhere. Obviously, this capacity allows great influence over market prices. As of April 2005, the world's excess oil production capacity was about one and a half million barrels per day; and all of this came from one nation in the Persian Gulf, Saudi Arabia. This advantage gives the Kingdom the ability to greatly influence production figures and market prices.[14]

Oil production costs also highlight the prominent position of Persian Gulf nations. The average production cost for the region is less than two US dollars per barrel.[15] According to the US Energy Information Agency (EIA), the capital investment required to increase production capacity by one barrel per day is less than $5,750 in the Persian Gulf states, which is considerably lower than other OPEC countries, where costs can exceed $12,870 per barrel. And, this production can be sustained for over a century--at current rates the reserve-to-production ration is over 115 years.[16]
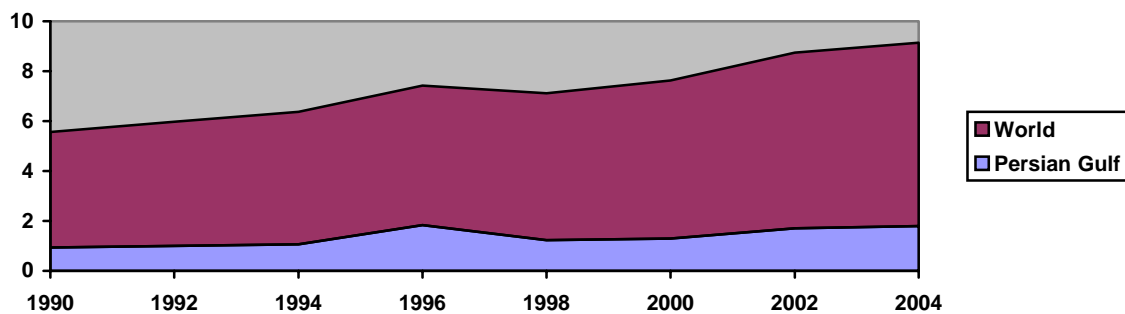
Figure 3.4 Natural Gas Liquids Production. Again, 2004 shows average production for first ten months. Data from US EIA, *International Petroleum Monthly*, December 2004.

In the first ten months of 2004, the Persian Gulf produced 24.6% of the world's natural gas liquids. When reserves are considered, the region's significance is higher. Russia leads the world in natural gas reserves, but it is immediately followed on the world charts by Iran, Qatar, Saudi Arabia, and the UAE. The bulk of this reserve comes from associated gas, and offshore sites are particularly rich in natural gas. Examples include Safaniya and Zuluf fields in Saudi, Dorra near the Saudi-Kuwait neutral zone, and a series of locations offshore of Qatar (Id- al Shargi, Maydan Mahzam, Bul Hanine and al-Rayyan).[17]

So, the Persian Gulf supplies the world with about one-fourth of its daily demand for fluid fossil fuels. But production figures only show only a partial picture. More important to this topic is the amount exported. The following chart comes from the US EIA, and it presents export figures for petroleum production, which includes crude oil and natural gas liquids, as well as lease condensate, other hydrocarbons, alcohol, and refinery gain. Here, net exports are calculated, by simply subtracting national consumption from national production. The last complete statistics come from the year 2003, and the following table depicts every Persian Gulf nation with net exports over one million barrels per day:

Table 3.1 Petroleum Net Exporters, Persian Gulf, 2003

World rank	Country	Net exports (M barrels per day)
1	Saudi Arabia	8.3
4	Iran	2.5
6	UAE	2.3
7	Kuwait	2.0
12	Iraq	1.0

Source: US EIA**,** http://www.eia.doe.gov.

Obviously, 2003 was a very challenging year for Iraqi oil exportation. The nation's pre-war crude oil production was almost three billion barrels a day, and about two-thirds of this was exported.   Production and exports have not returned to this level since the invasion; however, steady increases have been seen in both figures. For February 2005, crude oil production was 2.11 billion barrels per day, with exports of 1.51 billion barrels. The original goal, as documented by the US Department of State, was to equal pre-crisis levels; this was revised downward on 23 February 2005, to 2.5 billion barrels per day.[18] Iraq will continue to play a central role in the oil market.   And, the oil market will contribute significantly to the rebuilding of Iraq: the CIA reports that ninety-five percent of the nation's foreign exchange earning are from the oil sector.[19]   In the twenty-two months since May 2003, Iraq has received $26.47 billion in oil revenue.[20]

NATO DEPENDENCIES

This section details the dependence of NATO countries on Persian Gulf fluid fossil fuels. There are two goals: to contend that the region is critical to the economies of NATO nations, and to show that, proportionally, the Alliance's European nations have a far greater reliance on resources from the Persian Gulf.

The Organization of Economic Cooperation and Development (OECD) provides a useful template for analysis, for on a monthly basis this organization tracks the flow of petroleum from its source to its final destination. The OECD includes twenty NATO nations, and their tabulation method allows one to separate the bulk of NATO economies from the larger OECD group.[21]

Table 3.2 NATO's Total Gross Oil Imports from the Persian Gulf (M barrels per day)

	1991	*1993*	*1995*	*1997*	*1999*	*2001*	*2003*	*Total*
Belgium	.281	.292	.253	.261	.182	.198	.245	1.712
Canada	.087	.107	.071	.121	.089	.136	.141	.752
Denmark	.006	.002	0	.002	.002	.010	.002	.024
France	.712	.762	.651	.621	.626	.472	.426	4.270
Germany	.229	.251	.173	.158	.140	.089	.079	1.119
Greece	.220	.254	.222	.283	.283	.242	.219	1.723
Italy	.599	.599	.497	.586	.570	.486	.485	3.775
Netherlands	.613	.747	.616	.587	.621	.457	.367	4.008
Portugal	.068	.051	.107	.107	.110	.060	.040	.543
Spain	.283	.288	.326	.362	.339	.265	.262	2.125
Turkey	.326	.432	.338	.303	.282	.185	.239	2.105
UK	.223	.223	.136	.094	.031	.110	.111	1.010
Total above	3.648	4.043	3.390	3.487	3.275	2.710	2.616	23.167
US	1.843	1.781	1.572	1.755	2.464	2.761	2.501	14.677

Source: US EIA, *International Petroleum Monthly*, February 2005.
Note: NATO nations with total figures below .001 M barrels omitted.

The early period of this chart shows that the nineteen NATO members listed in the top of the table had roughly twice the amount of oil imports from the Persian Gulf as compared to the United States. By the turn of the century, parity had been reached. But, these are only raw numbers. Since 1990, though, the US EIA has tracked the regional percentages of oil importation. Broad divisions are used, but the figures are quite revealing:
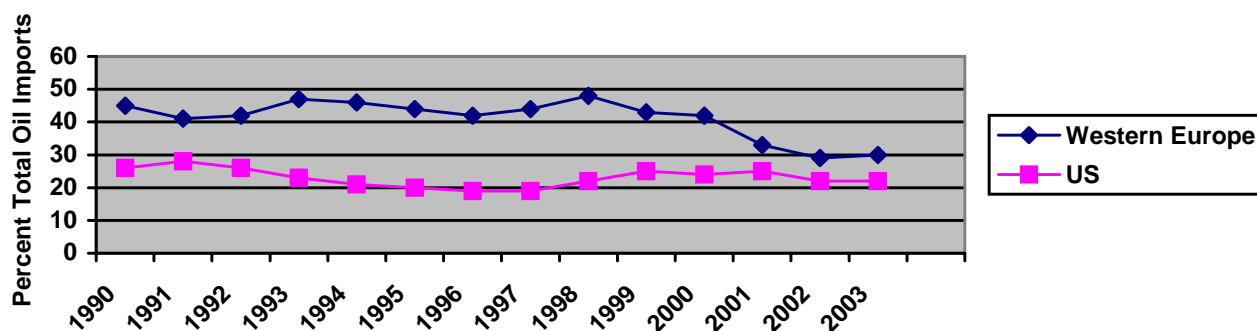
Figure 3.5 Persian Gulf as Percent of Total Net Oil Imports. Figures from US EIA, Persian Gulf Fact Sheet, p. 5, http://www.eia.gov.

Calculating fuel fractions would provide a much more precise determination. This level of detail is not necessary here, but it would specifically quantify the NATO dependence on Persian Gulf fluid fossil fuels. To do this, national energy consumption is calculated, and the contribution of crude oil and natural gas is assessed. The import source is then tabulated for each component. Ultimately, figures can be derived, to show how much energy is imported and used by each NATO nation, and this can be cross-referenced to a

list of energy exporting nations. Again, this is too precise for our purpose, but it would provide a deeper layer of analysis.

The European Union also provides another useful format for analysis. Overall, the EU is a net energy importer, with Germany, Italy, and France the largest energy importing nations. Within the EU, only the UK and Denmark are energy exporters.[22] Further, oil was the EU's dominant fuel in 2001, accounting for forty-three percent of total energy consumption, followed by natural gas at twenty-three percent. For that year, the EU used indigenous sources for twenty-four percent of its oil and fifty-seven percent of its gas. In the future, these figures are projected to climb. The EU possesses only 0.6% of the world's proven oil reserves, and only two percent of the world's natural gas reserves. According to a recent report published by the European Commission, by 2020 two-thirds of the EU's total energy requirements will be imported.[23]

It is often noted that the United States is the world's largest consumer of oil. This is true; the US used twenty million barrels per day in 2003. But this is merely a hanging figure-- for relative sizes, sources, and dependencies are not mentioned. Missing are such necessary elements as the size of the US population, urbanization figures, and economic production capacities. The US economy is the largest in the world, comparable to the combined economies of the other twenty-five NATO nations. Another salient fact is that the US is the world's second largest oil producer, with 8.84 million barrels of oil per day, behind only Saudi Arabia with the 9.95 million barrels per day.[24]

To take this one more layer, the figures for the US economy can now be assessed more precisely by examining the sources of these imports. Canada is the top supplier to the US, providing over two million barrels per day in 2003. The remaining nations in the top five are Saudi Arabia, Mexico, Venezuela, and Nigeria. Other Persian Gulf nations are much further down the list: Kuwait (13th), UAE (37th), and Qatar (52nd).[25] Suppliers in the Persian Gulf meet about one-fifth of the US daily imports. In the past three decades the US has greatly reduced the fraction of its dependence on the Persian Gulf for direct sources of energy.

Net oil imports present further evidence of this disparity in dependence. "OECD Europe," a subset of the larger organization, includes twenty-two of the organization's thirty members; seventeen of these are also NATO members. As a percent of energy demand (meaning the requirement to provide products and services for energy use), the Persian Gulf region provided thirteen percent of US net imports in 2000, and twenty-two percent for OECD Europe. That same year, as a percent of total oil imports, the Persian Gulf provided twenty-four percent of US net imports, and forty-two percent for OECD Europe.[26]

Additionally, the issue becomes more pronounced when future resources are examined. The following chart draws from information calculated by the US Geological Survey and the US EIA, and shows figures out to the year 2025. Now and in the future, NATO's European nations have even greater economic interests in the Persian Gulf region than the United States:

Table 3.3 Estimated Fossil Fuel Resources, 1995-2025 (B barrels)

Country or region	Proved Reserves	Reserve Growth	Undiscovered	Total
Eastern Europe*	1	2	1	4
Western Europe	18	19	35	72
US	23	76	83	182
Canada	179	13	33	224
Middle East	727	253	269	1,249
World Total	1,266	730	939	2,935

Source: *Oil & Gas Journal*, 22 December 2003, pp. 46-47; US Geological Survey, *World Petroleum Assessment 2000*; US EIA, *International Energy Outlook 2002*.
Notes: * Eastern Europe does not include the former Soviet Union. Figures rounded to the nearest billion barrels.

CRISES AND PRICES

In the oil market, uncertainty breeds price volatility. Middle East production is operating near capacity, and any political instability in the region often leads to market fluctuations. As discussed above, the Persian Gulf region retains a prominent position within world oil production. But, even if a nation imports oil from other sources, the Persian Gulf states will occupy a central role in this transaction due to their ability to control a portion of the oil supply and thus influence the price per barrel on world markets.[27]

The US EIA has an excellent graph which tracks the price of crude oil (in this case, Saudi light crude) over time. Further, it annotates the timing of historic events over the past four decades:
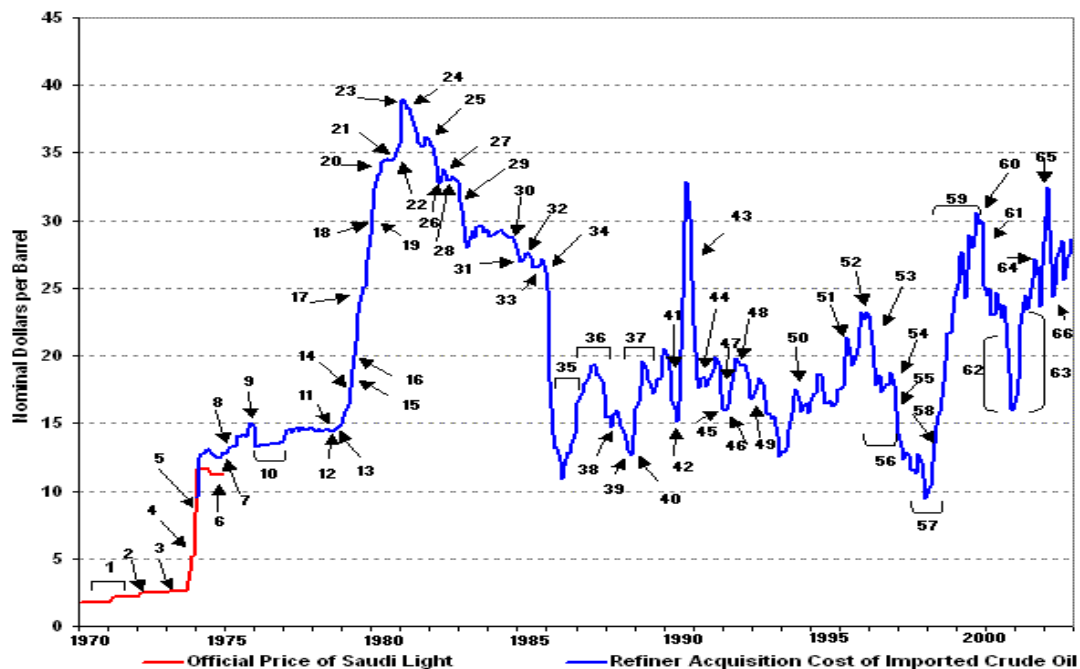
Figure 3.6 Oil Prices Chronology, 1970-2003. Figure from US EIA, World Oil Market and Oil Prices Chronologies, 1970-2003, www.eia.doe.gov.

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The following table highlights relevant key events depicted in the figure above. Each point mentioned involves the Persian Gulf region, and thus relates directly to this report.

Table 3.4 Key Events Related to Oil Prices, 1973-2003

Point	Date(s)	Event
4	October 1973	OPEC oil embargo begins (ends March 1974)
13	January 1979	Iranian Revolution
17	November 1979	Iran, US Embassy hostages (released January 1981)
23	September 1980	Iran-Iraq War, first major combat (through 1988)
42	August 1990	Iraq invades Kuwait
43	January 1991	Persian Gulf War begins (through March 1991)
52	September 1996	Iraq-supported invasion of Kurdish regions
54	December 1998	Iraq refuses UN inspectors access to certain sites
56-57	1997	Iraq boosts production
62	Late 2001-early 2002	Rising regional tension, "Axis of evil" label
63-65	Mid 2002 - early 2003	Regional tension, build up to war
66	March 2003	Iraq War

Source: US EIA, World Oil Market and Oil Price Chronologies, 1970-2003, www.eia.doe.gov.

It requires more detailed analysis to fully compare the correlation between each event and oil prices, and that level of detail is beyond the scope of this report. However, causation and precise effects are unnecessary here. Suffice it to say that uncertainty in the Persian Gulf region appears to have an impact on the price of crude oil. As shown previously, the Persian Gulf states accounted for roughly one-fourth of the world's oil supply during the 1990s, and troubles in the region seem to have reverberated across world markets.

Production figures also illustrate the impact of regional tensions. The US EIA's *Monthly Energy Review* tabulates crude oil production around the world. Overlaying production figures for the Persian Gulf with some of the crisis dates above reveals further information about the effects of instability. The first column below selects the month prior to the onset of a crisis and compares it to the lowest figure reached during the time of instability. The middle column merely tracks the difference between these two production figures. The last column shows the elasticity, or more correctly the lack thereof, of the production; in other words, the time required for the region to return to production levels of the pre-crisis period.

Table 3.5 Effects of Instability, Persian Gulf Crude Oil Production, 1973-2003

Comparison Dates	Production Change (K barrels per day)	Recovery Time
Sep 73 - Nov 73	- 3,374	6 months
Dec 78 - Feb 79	- 1,561	4 months
Aug 80 - Oct 80	- 3,704	12 years, 4 months
Jul 90 - Aug 90	- 3,916	1 year, 7 months
Dec 90 - Apr 91	- 1,402	9 months
Feb 03 - Jun 03	- 2,087	11 months

Source: Raw figures found in US EIA, *Monthly Energy Review*, December 2004,
Note: Recovery time is length of time until oil production figures return to pre-crisis levels.

A correlation seems apparent. More so, production recovery times show the lingering damage left by periods of heightened regional tensions.

Turning to more recent events allows a more precise assessment of the relationship between oil and regional conflict in the Persian Gulf. Regional tension can lead to uncertainly about the flow, pricing, transportation, and availability of oil. In turn, oil suppliers may raise prices to deal with these potential variables. This price increase is then passed on to the consumer, in the form of what scholars have dubbed "risk premium." At the end of 2004, this additional cost was estimated to be approximately ten US dollars per barrel.[28] The chart below shows the basket price of OPEC oil, gradated into two-month periods, over four years. As mentioned, Saudi Arabia can greatly influence the price of oil. Again, this graph also shows figures for Saudi light crude oil.
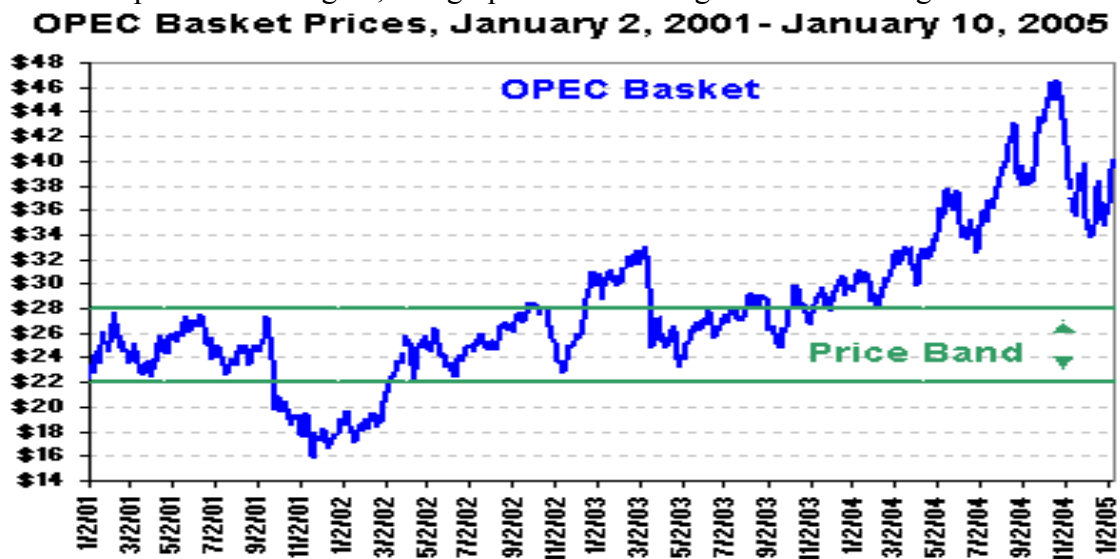
source: EIA/OPEC News Agency (official OPEC news source)
Figure 3.7 OPEC Basket Prices, 2001-2005

As depicted above, OPEC strove to maintain a desired basket price band of $22-28 per barrel.[29] The spike in the middle of the figure is when the Iraq War commenced in March 2003. This conflict did have an impact on regional oil production, but it has since rebounded. Over the four-year period depicted above, the Persian Gulf had an average daily crude oil production of 21.06 million barrels per day. It was just under twenty million in June 2003. In January 2005, the region produced 23.40 million barrels per day, the highest daily production shown in US EIA charts.[30]

More directly, Iraq has almost 8,500 kilometers of pipeline for the transportation of fluid fossil fuels and products. In the past year, there have been 180 insurgent attacks on these sites and related infrastructure.[31] Protection of these locations is largely a military responsibility, and the next two chapters will detail the military capability of the Alliance and show how it could be used to perform expanded missions in Iraq.

Notes

[1] Daniel Yergin, *The Prize: The Epic Quest for Oil, Money, & Power*, (New York; Free Press, 1991), p. 14.

[2] Ian Lessor, "Energy Security" in Nora Bensahel and Daniel Byman, eds., *The Future Security Environment in the Middle East: Conflict, Stability, and Political Change*, (RAND Corporation; Santa Monica, 2004), p. 223. (Hereafter cited as Lessor, RAND, *FSEME*).

[3] For this chapter of the report, I am particularly grateful to Professor Cliff Singer and T.S. Gopi Rethinaraj, both of ACDIS at the University of Illinois. Their knowledge, research, and expertise contributed significantly to the information contained throughout this chapter.

[4] In 1997, the ratios were 4:2.6:2.2:1.2, with coal still second. The IEA *2000 World Energy Outlook* predicts that in 2020, natural gas will pass coal, with the new ratio of 4:2.4:2.6:1. I am grateful to Professor Cliff Singer for this information, which was taken from his course NPRE 201: Advanced Energy Systems.

[5] Recent studies provide some fascinating figures on this compression. One finds that a quarter million pounds of primeval plants were required to produce one gallon of gasoline. Another calculates that the average US light vehicle burns enough gasoline each day equal to one hundred times its weight in ancient plants. Amory B. Lovins, et al, *Winning the Oil Endgame: Innovation for Profits, Jobs, and Security*, (Snowmass, CO; Rocky Mountain Institute, 2004), p. 2. For calculations related to light vehicles, see J. Dukes, "Burning Buried Sunshine: Human Consumption of Ancient Solar Energy," *Climatic Change* 61, pp. 31-44.

[6] Another, more difficult and costly method is "non-conventional" or "unconventional" extraction, which mines sand, shale, and coal beds for petroleum.

[7] Condensates (such as water, sediments, and dissolved gases) are also obtained through this indigenous production.

[8] For further information about Standard Oil's monopoly and breakup, see Yergin, *The Prize*, chapters 4 and 5, pp. 78-113.

[9] These ideas and information come from Clifford Singer, *Energy and Security: From Babylon to Baghdad*, ACDIS Course Reader NPRE 380, University of Illinois at Urbana-Champaign, 2004, pp. 50-54.

[10] Organization of Economic Cooperation and Development (OECD), International Energy Agency, and Eurostat, *Energy Statistics Manual*, (OECD, Paris, 2004), p. 69. This point will be further discussed later in this chapter.

[11] In theory, wet gas can also be found with unassociated gas.

[12] LNG is not to be confused with natural gas liquids, which is the product of reservoir extraction.

[13] International Energy Agency, *Energy Statistics Manual*, p. 55.

[14] As an example of this capacity, Saudi Arabia claims that it increased production output within 48 hours of the March 2003 invasion of Iraq. See US EIA, Persian Gulf Fact Sheet, pp. 1-2; Lovins, et al, *Winning*, p. 248-249; Lessor, RAND, *FSEME*, p. 205. For a discussion and the latest figures, see a series of articles in *The Wall Street Journal*, 10 April 2005. One article mentions that this excess capacity may not be fully useable by refiners, because it consists mainly of medium- to heavy crude, which has high sulfur

Notes

content. Many refineries have only a limited ability to use this type of crude for gasoline and diesel fuel.

[15] Aramco, Saudi Arabia's state-run oil firm, has the lowest discovery and development costs in the world. At a mere fifty cents per barrel, this is one-tenth of what private sector firms pay in Russia, the North Sea and the Gulf of Mexico. "Big Oil's Biggest Monster," *The Economist*, 8 January 2005, p. 53.

[16] US EIA, "International Energy Outlook - World Oil Markets," http://www.eia.doe.gov, p. 11.

[17] Additionally, Qatar controls North Field, which is the largest non-associated natural gas field in the world. Information from US EIA, "Persian Gulf Oil and Gas Exports Fact Sheet," http://www.eia.doe.gov.

[18] Brookings, *Iraq Index*, Economic indicators, fuel table; revision of production figures from US Department of State, *Iraq Weekly Status Report*, 23 February 2005, both found at http://
brookings.edu/iraqindex.

[19] CIA, *CIA World Factbook,* Iraq, http://www.cia.gov/cia/publications/factbook/geos/iz.html.   Accessed 12 March 2005.

[20] Brookings, *Iraq Index*, economic indicators, 'Oil revenue table.' Accessed 12 April 2005.

[21] Due to political changes since the dissolution of the Soviet Union, six countries are missing from these OECD historical data: Bulgaria, Estonia, Latvia, Lithuania, Romania, Slovenia, and Slovakia. Additionally, the total figures for the other seven NATO nations not in the table are merely .001M barrels, and this comes entirely from Norway's imports in 1991.

[22] Of significance, Norway (with its substantial resources of fluid fossil fuels) is not a member of the EU.

[23] European dependencies from *European Union Energy Outlook to 2020*, cited in US EIA, Regional Indicators--European Union, http://www.eia.gov, p. 2.

[24] US EIA, Non-OPEC Fact Sheet, Top World Oil Producers 2003, http://www.eia.doe.gov/emeu/topworldtables1_2

[25] US EIA, Top Suppliers of US Crude Oil and Petroleum 2003, Top Ten Lists & Rankings, http://www.eia.gov.

[26] US EIA, Persian Gulf Fact Sheet, p. 5, http://www.eia.gov.

[27] For discussion, see Lessor, RAND, *FSEME*, pp. 200-202, 205, 218.

[28] The term is also known as a "fear premium." Cost estimates per barrel for 2004 were $7-15 for the third quarter, "Big Oil's Biggest Monster," *The Economist*, 8 January 2005, p. 54; and $5-12 for the end of the second quarter, Lovins, et al, *Winning*, p. 11. For background to the concept of risk premium see Lovins, et al, *Winning*, p. 11-12, 248; Executive Summary, *World Energy Outlook 2004*, pp. 31-32; Lessor, RAND *FSEME*, pp. 205, 218.

[29] Saudi Arabia's oil minister, Ali Naimi, has stated that his country seeks "a fair price" for oil. The price per barrel that he mentioned in early 2005 was $32-34, and remains "a moving target." "Big Oil's Biggest Monster," *The Economist*, 8 January 2005, p. 53.

Notes

[30] US EIA, Table 1.4 World Oil Supply, 1990-Present, *International Petroleum Monthly*, March 2005.

[31] The pipeline figure includes oil, natural gas, and refined products. CIA, *CIA World Factbook*, Iraq. Attacks, Brookings, *Iraq Index*, chart 'Attacks on Iraqi oil & gas pipelines, installations, and persons,' accessed 12 March 2005.

Chapter 4

NATO Military Assessment

NATO has enormous capacity...The capacity is there.
General James Jones, SACEUR
Speaking about Iraq, October 2004[1]

This chapter will examine the defense expenditures and military forces of the NATO nations, to assess elements of hard power and resultant commitments dedicated to its fulfillment. The starting point will be national economies and military budgets, for each nation and the Alliance as a whole. A brief assessment will then be made of NATO military forces, with emphasis on those available for ground operations. Lastly, NATO deployments will be discussed, to show how operational capabilities have been used in the past decade. The thesis of this chapter is that NATO has the money, the forces, and the experience to contribute fully, actively, and successfully to an expanded military mission in Iraq.

DEFENSE EXPENDITURES

The key factors for this section are relative investments--the so-called defense burden--and the cumulative potential this provides the Alliance. Due to the wide differences among members, the typical figures used to describe national military budgets can be quite deceptive. Mere defense expenditures are insufficient for our purposes, and do not accurately depict the relative defense burden of each NATO nation. There are far more representative figures for assessing each nation's commitment to hard power.

A more effective method for determining the economic commitment to the military instrument of national power is to take the Defense Expenditure (DE) for each nation, then divide this figure by the nation's Gross Domestic Product (GDP). This, in turn, shows the percentage of each nation's military outlays as a portion of its intake. This allows a more thorough examination of the relative defense burden.
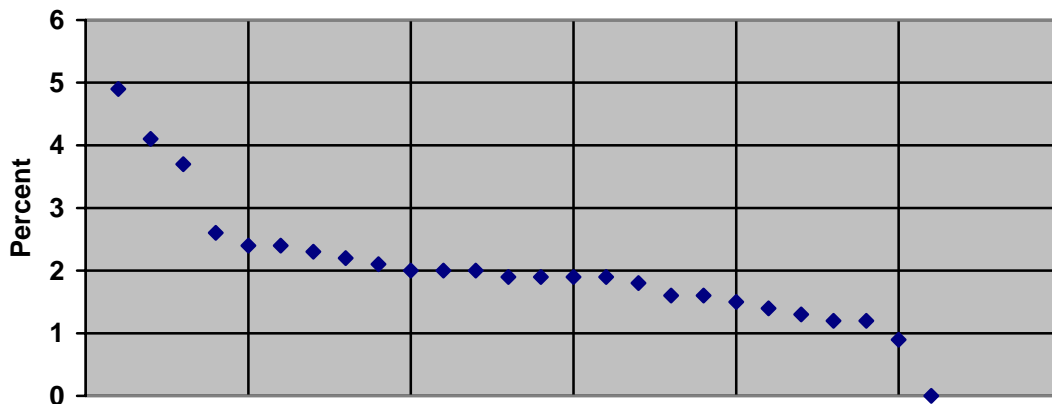
Figure 4.1 Defense Expenditures as Portion of GDP, NATO Nations, 2003. From IISS, *The Military Balance, 2004-2005,* table 38. Figures based upon constant US dollars.

This chart is a visual representation of the relative financial commitment made in 2003 by each of the twenty-six NATO nations. Separate labels for each nation are unimportant, except perhaps to identify those countries on the extreme ends. The three nations with the highest figures are Turkey with 4.9 percent, Greece with 4.1 percent, and the US with 3.7 percent. The last nations are Canada and Spain (tied) with 1.2 percent, Luxemburg with 0.9 percent, and Iceland with zero (for Iceland has no military forces). These figures are derived from a series of tables developed by the International Institute for Strategic Studies (IISS) in London. Calculations based on their work shows that the average defense spending for NATO's twenty-six nations is 1.96 percent.[2]

To take this analysis one step further, we can examine figures per capita, to show the relative expenses borne by an individual citizen within each member nation. If the GDP per capita is divided by the DE per capita, this results in a figure that shows the personal investment in national military forces.[3] In other words, this calculation reveals the individual defense burden upon each citizen. The lower the number, the greater the personal investment in national defense.

Table 4.1 Per Capita Defense Burden Equivalency, 2003

(DE/GDP) per capita	
< 30	Turkey, Greece
< 40	US
< 50	Bulgaria, France, UK, Romania, Portugal, Czech Republic
< 60	Slovakia, Italy, Lithuania, Poland, Norway, Hungary, Latvia
< 70	Netherlands, Denmark, Estonia
< 80	Germany, Slovenia
Greater than 80	Belgium, Spain, Canada, Luxemburg, Iceland

Source: Derived from IISS, *The Military Balance 2003-2004*.
Notes: Countries listed in relative order within groups. For complete figures
for each country, see appendix.

Proportionally, a Turk spends twice as much of his income on defense as a Bulgarian, over three times as much as a Dutch citizen, and almost six times more than a Luxembourger. The average defense burden equivalency across the Alliance's twenty-six nations is 56.25. But, these calculations also reveal a troubling point. These are relative figures, which show the individual cost borne by a citizen. Obviously, there are economies of scale. A richer or more populous nation has a greater impact on the Alliance as a whole. And in that respect, four of the wealthiest NATO nations are near the bottom of the list above. Germany, Belgium, Spain, and Canada have economies in the top fourth of the Alliance; and all have relative defense burdens in the bottom fourth.

Even so, the commitment of most NATO nations towards defense is quite strong. The claim put forth by Robert Kagan (in his 2003 book *Of Paradise and Power*) that Europe is "weak and dependent" is not entirely accurate. First, in regards to the generality that there is a European perspective on defense, it should be seen that Europe (at least as represented by the NATO members) is much more diverse. There is not a single, European view on defense spending. Philosophically, perhaps, there is more congruence, but in practice there is wide diversity across the European continent. Another point of contention with Kagan's argument is the description of European weakness. This is a relative term, and for Kagan's purposes he uses the United States versus "Europe."[4]

Certainly, the United States invests heavily in military forces. This matter will be assessed more fully in Chapter Six, but suffice it to say that in 2002, Americans spent forty-three percent of the entire world's military budget.[5] The overall figures for the US military are impressive, but that is not the issue here. In this comparison NATO nations are less strong and most far less committed militarily. NATO's defense planning practices seek to balance burden sharing across its members, so during intra-alliance discussions, it is fair to weigh individual commitments by each separate nation and critique these defense investments versus other members. This is an old argument, and dates to the genesis of the Alliance. A recent book by Lawrence S. Kaplan, one of the true deans of NATO studies, repeatedly cites the frustration exhibited by American leaders with the modest monetary commitments given by European capitals towards defense.[6] However, the picture is considerably different when the analysis broadens.

What really matters here is how the Atlantic Alliance compares to the rest of the world, where potential adversaries will develop. To examine this we can use data from the Stockholm International Peace Research Institute (SIPRI) and the World Bank. The *SIPRI Yearbook*, an annual defense analysis, uses two methods to calculate the world's military spending.[7] Using either method, NATO nations are extremely well represented. Across the military forces of 158 nations worldwide, six NATO nations rank in the top eight percent of the world:

Table 4.2 Military Spending, Placement in World, 2003

	Based on Market Exchange Rates	Based on Purchasing Power Parity
United States	1	1
United Kingdom	3	6
France	4	5
Germany	6	8
Italy	7	9
Turkey	14	13

Source: SIPRI, *SIPRI Yearbook, 2004*, table 10.4, p. 312.
Notes: Based on constant 2000 prices, markets, and exchange rates. SIPRI obtained PPP figures from the World Bank.

Combined, the six nations listed above account for sixty percent of the world's military spending.[8] Sixty percent. In 2003, based upon current prices and exchange rates, NATO member nations spent *$593 billion* on defense.[9] No potential enemy, no current alliance, no existing collection of nations, can match the military investments shown by NATO. Should it choose, NATO has the military budgets to contribute fully in Iraq.

GROUND COMBAT FORCES

NATO has only a few permanent military forces, but the Alliance has a tremendous pool of forces to draw from should political decisions be made to use them. True "NATO forces" currently exist only at the Alliance's multinational headquarters, the NATO Airborne Early Warning and Control Force (known as Force Command, which operates the Alliance's fleet of E-3 aircraft), a standing naval force (which deploy on a rotational basis), and a small number of permanent facilities responsible for communications, air defense, and surveillance.[10] The majority of NATO's military capability comes from national forces. As another section will describe, when a potential deployment develops a series of steps are used to put these national forces under formal NATO command. Other than Article 5 operations, which have a slightly different protocol, the general process goes like this: first, political consensus is reached at the NAC. Military requirements, concept of operations, and concept of employment are developed by the appropriate NATO headquarters, then presented for concurrence at a host of bodies at NATO Headquarters. Once agreed, a force generation conference is held, to get formal commitments from the nations. Then, at a predetermined point in time, these national forces "chop" to NATO control.

A brief discussion will show the tremendous collection of national forces potentially available to the Alliance. Of interest here are forces that could be used for ground operations and direct support in Iraq. Thus, the following are predominately army forces, with some aerial mission support from air force tactical fighters and bombers. A true joint operation will require forces and capabilities from all of the military services. What follows is not meant to be all-inclusive, but rather illustrative of the types of forces that could be available for NATO use in Iraq. This, then, is an unclassified summary of the NATO ground order of battle, which is readily available from open sources.

The following table shows the main forces of interest for an expanded NATO mission in Iraq. This is only a summation; a complete, country-by-country breakdown is available in the appendix. The US military is by far the largest contributor, but for this section the American numbers are not included. They would dilute the potential contributions of the other NATO countries, and skew the data. Chapter Six will present US numbers relative to the rest of NATO. For our purposes here, though, they are not needed. So, even when factoring out the largest military force in the Alliance, a vast array of combat forces is still available.

Table 4.3 Military Holdings of 25 NATO Countries

	NATO 25
Active duty military	2,058,300
Armored Combat Vehicles	28,194
Artillery	17,625
Main Battle Tanks	15,638
Combat Aircraft	4,262
Attack Helicopters	1,264

Source: IISS, *The Military Balance 2004-2005*.
Notes: US forces not included. These figures represent the total holdings of all personnel and equipment.

NATO has the forces to actively contribute to a much larger mission in Iraq. As SACUER said in October 2004, when discussing the possibility of expanding NATO operations in Iraq, "The capability is there."[11] Should the Alliance decide to expand its mission, the forces already exist. The next section will examine some of the operational capabilities of these forces.

OPERATIONAL EXPERIENCE

Many of the national forces mentioned above have recent experience operating under NATO command. In the past decade, NATO forces have operated on a large scale in four out of area conflicts: Bosnia, Kosovo, Macedonia, and Afghanistan. In these operations, NATO has proven itself to be fully capable. When the political will is present, the Alliance can forcefully and successfully project and sustain military power. This section will provide a brief overview of these crises, to show that NATO has considerable operational experience, which could be put to valuable use in Iraq.

The wars of Yugoslavia's dissolution, as the NATO documents refer to them, involved a series of crises that eventually sparked NATO's participation in three separate conflicts located in Bosnia/Herzegovina, Kosovo, and Macedonia. The conflicts, and NATO's participation, have been ably described elsewhere.[12] However, there are some salient points that emerge from these crises to show the political power of solidarity and the military capability to measurably contribute to the positive outcomes which resulted.

With the breakup of the Yugoslav Federation in 1991, the United Nations had initial responsibility for limiting the conflict, ending hostilities, enforcing a ceasefire, brokering a peace agreement, and aiding non-combatants in the region. The conflict was just beyond NATO territory, and gradually NATO began to support the United Nations by ensuring compliance with economic sanctions, an arms embargo, and a no-fly zone. American aircraft, operating under NATO auspices, began airdrops in 1992, and the next year the United Nations requested NATO patrol a no fly zone over Bosnia, to enforce UN Security Council Resolution 781. Through late 1994, NATO air forces operated under a "dual key" arrangement, with approval necessary from the United Nations and NATO before any direct action. This was used in February that year, when US aircraft (again, acting under NATO auspices) carried out limited strikes against Serbian targets following a Serb mortar attack on a Sarajevo marketplace. In the summer of 1995, two events brought NATO unity and the Alliance began formal, direct action. The Srebrenica massacre exposed the ineffectiveness of the UN Protection Force, and another Serb mortar attack in Sarajevo killed thirty-eight people. The United Nations, and European nations in particular, came to realize that the world body's efforts would be inadequate. As has been told elsewhere, NATO commenced direct involvement on 30 August 1995, when Alliance forces began an eleven-day air campaign against Bosnian Serb forces. This campaign, Operation Deliberate Force, involved 293 aircraft from eight NATO countries flying 3,515 sorties against Serbian targets.[13] This was the largest combat in Europe since World War II and its purpose was to ensure the sanctity of UN safe zones and to force the belligerents to negotiate. This brought all sides to the Dayton Peace Conference, and the Dayton Accord came into effect on 14 December 1995. Six days later, IFOR was established in Bosnia. IFOR had sixty thousand soldiers, and was commanded by a NATO general officer, who ultimately answered to the NAC.

The mission of IFOR was to implement the military aspects of the Dayton Accords; specifically, end the hostilities, separate the combatants, and ensure a peaceful transfer of territories between the newly created political entities (the Federation of Bosnia and Herzegovina, and the *Republika Srpska*). For the next year, the NATO-led IFOR succeeded in all of these tasks. In December 1996, a smaller NATO-led force known as SFOR replaced IFOR. SFOR ensured the continued success of IFOR's mission, with additional responsibilities for supporting civilian agencies operating in the region. Although many nations were concerned about the possibility of an open-ended commitment with expanding tasks, steady progress was made and political consensus was maintained. The success of IFOR and SFOR can be seen with the NATO military presence in Bosnia. The initial deployment was gradually reduced, until only seven thousand NATO soldiers remained by the spring of 2004. In November 2004, NATO forces transferred command responsibilities and operational control of this region to

forces the European Union. The EU commander (a UK general) and eighty percent of the forces under his command had served with NATO in SFOR.

Instability gained hold in Kosovo during late 1998, and NATO once again reached consensus on active participation. Following a flood of three hundred thousand refugees, the Organization for Security and Cooperation in Europe sent observers into the province, and NATO sent a task force to neighboring Macedonia, in case the observers needed to be evacuated. The next year, amid carnage and chaos, the observers were pulled out. On 24 March 1999, acting under Article 4 of the North Atlantic Charter, NATO went to war against Serbia. This was "exclusively a NATO affair," with the military portion of the conflict directed by SACEUR.[14] For seventy-eight days, NATO aircraft attacked Serbian forces and targets. There were many lingering issues with this "war by committee," but beyond the political fissures, there were also military issues of incompatibility. This air war exposed significant technological disparities among Alliance air forces, with the US forces functioning a full generation beyond those of most NATO forces. Clearly, a "capability gap" was apparent in central issues of military aviation such as command and control, strategic airlift, aerial surveillance, precision guided munitions, and air refueling.[15]

On the ground, NATO forces also supported the refugee crises in Albania and Macedonia. Following the Military Technical Agreement between NATO and Yugoslav commanders, and with a UN mandate, NATO formed and deployed the Kosovo Force (KFOR) into the province. The initial KFOR had forty-three thousand soldiers, from NATO and eighteen other nations. The mission of this force included many military tasks: deter hostilities, secure the environment, demilitarize the Kosovo Liberation Army, support international humanitarian operations, and work with the UN Interim Administration Mission in Kosovo. KFOR troops also ensured the Kosovo Liberation Army disbanded, and collected and destroyed any unauthorized weapons. A local civil emergency force, known as the Kosovo Protection Corps, was also built and supervised by NATO. KFOR troops actively enhanced security in the province, by patrolling borders, manning checkpoints, and performing guard duty at sites throughout the province. All of these tasks provided valuable experience to the Alliance.

In 2001, NATO troops were also sent to the former Yugoslav Republic of Macedonia. In June of that year, a formal request was made of NATO to disarm ethnic Albanian groups, known collectively as the National Liberation Army. In August, following a cease-fire and the signing of a peace treaty, 3,500 NATO soldiers deployed on a thirty-day mission. The next month, NATO was asked to retain some troops in the area, to protect international observers who were monitoring the situation. For a year and a half, almost seven hundred NATO solders remained deployed in Macedonia. In March 2003, the NATO operation ended, and command responsibility passed to the European Union.[16]

Afghanistan is another example of NATO out of area operations. Following the successful US invasion of 2001, the UN Security Council passed Resolution 1386 to assist the Afghan Transitional Authority. This created the International Security Assistance Force (ISAF), with an initial charge to maintain security in the capital of

Kabul and its surrounding areas. The United Nations requested troops, and since inception of this operation, ninety percent of the soldiers have been from NATO nations. Initially, though, NATO had no formal involvement. The mission had a rotating command structure, which changed every six months and was first led by the UK (ISAF I), then Turkey (ISAF II), then shared by Germany and the Netherlands (ISAF III). All of these are NATO members. During preparations for ISAF III, which began in February 2003, the two lead nations requested NATO assistance with planning and support. On 11 August 2003, the NATO Alliance formally assumed command of the entire ISAF operation. No longer would a lead nation be needed every six months, for the Alliance itself took command and established a permanent headquarters in the country.[17]

Initially, NATO forces were only responsible for several security tasks in and around Kabul. Soon, these forces began to assist with the training and development of the Afghan National Army, national police, and Kabul City Police. NATO also helped to demobilize and disarm former militia members. In the first seven months, NATO forces had trained 900 soldiers per month and disarmed 240 militia per month. NATO troops routinely conduct patrols with Afghan police and military units. Since December 2003, NATO forces have assisted with the hand-over of heavy weapons, by collecting and transferring these arms from the militia to the fledgling National Army. NATO also directly supports aviation operations at the Kabul International Airport, which serves as a hub for ISAF's logistics. For several weeks beginning in December 2003, ISAF also provided security for the Constitutional *Loya Jirga*, which laid the groundwork for the first Afghan elections. Throughout this period, and still continuing, ISAF had coordinated civil military projects, which fundamentally contribute to the rebuilding of nation and directly improve the lives of the civilian population. ISAF is involved with such diverse areas as local infrastructure, administration, health, education, and agriculture.[18]
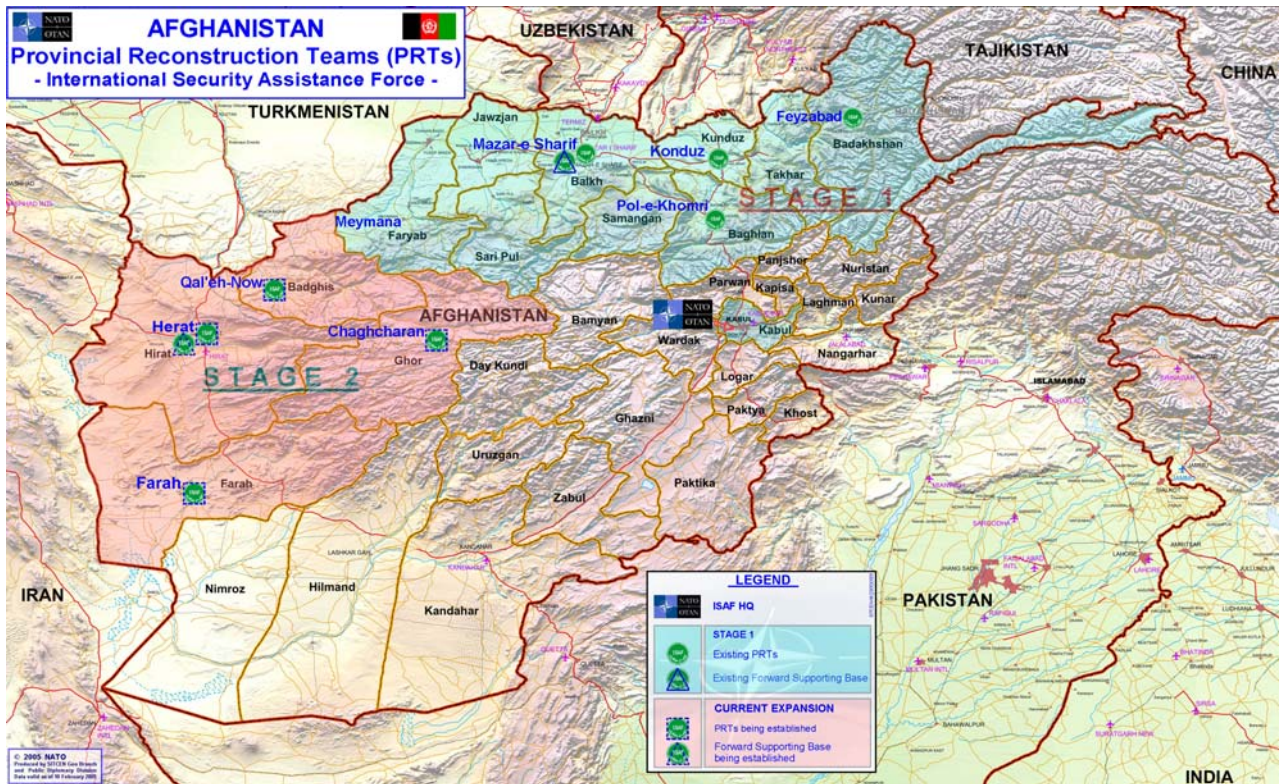
Figure 4.2 Afghanistan, Provisional Reconstruction Teams. From NATO website, see http://www.nato.int/multi/map-afghanistan.htm. Accessed 5 April 2005.

In early 2004, the NAC agreed to expand NATO's ISAF mission and move beyond Kabul. Previously, Provisional Reconstruction Teams (PRTs) had been established around the country, and within these groups, a lead nation provided local assistance to extend the authority of the central government. NATO has begun to take over for the lead nations. The test case was the Kunduz PRT, and NATO ISAF assumed command from Germany on 6 January 2004. By the summer of 2004, NATO had assumed command of five other PRTs, in the north and west of the country. NATO forces also reinforced security for the Afghan elections of September 2004.

The NAC provides political direction for ISAF. From 2001 through 2005, there were two military commands in Afghanistan. ISAF was independent of the US-led activities (which are collectively known as Operation Enduring Freedom, with a mission of counter-terrorism--to actively find and destroy the remnants of *al-Qaeda* and the Taliban). According to press reports, the NAC has agreed to unify the two commands. The exact date of this merger is not known at this time, but the Secretary General stated it would be "as soon as feasible," with an expectation of early 2006.[19] Many details have yet to be worked out, but consensus has been reached for NATO command arrangements. By February 2004, there were nineteen NATO nations in Iraq, and five more nations that were soon to be members. At that time, there were almost 6,200 NATO soldiers in Afghanistan. Altogether, there were thirty-four nations in ISAF, and all 6,400 soldiers were under NATO command.[20]

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This series of operations has shown the true military capability of the Alliance. All of these missions took place through political unity, monetary commitments, and military efforts. Repeatedly, NATO has proven itself to be capable of maintaining security, restoring stability, and providing critical support for nation building.

TRANSFORMATION

Overall, the series of out of area operations was successful, but in some specific areas revealed a growing disparity in the capabilities of NATO members. Repeatedly, Alliance leaders noticed this gap, and grew concerned that it could hamper the usefulness of the Alliance. The Washington Declaration, signed by the heads of state and government in April 1999, stated "we will maintain both the political solidarity and the military forces necessary to protect our nations and to meet the security challenges of the next century. We pledge to improve our defense capabilities to fulfill the full range of the Alliance's 21st century missions."[21] In pursuit of this, the Washington Summit produced a program known as the Defense Capabilities Initiative, with an objective "to enhance the abilities to conduct effective multinational operations across the full spectrum of Alliance missions." Remembering lessons from Kosovo, special emphasis was placed on improving interoperability among Alliance forces. NATO documents on this topic specifically stress that "operations may be undertaken outside Alliance territory, with little or no access to existing NATO infrastructure." The 1999 Defense Capabilities Initiative encompassed five specific military capabilities:

- Deployability and mobility
- Sustainability and logistics
- Survivability and effective engagement
- Command and control
- Information systems [22]

This was the genesis of a concept that is now known as "transformation." For the purpose of this report, transformation can be defined as induced change.[23]

Three years later at the Prague Summit, Alliance leaders fully embraced transformation and directly linked it to out of area operations. The resulting summit declaration proclaimed: "to meet the grave new threats and profound security challenges of the 21st century…we commit ourselves to transforming NATO…to strengthen our ability to meet the challenges…*from wherever they may come*." Three transformational initiatives sprang from this summit, and all sought to fulfill the declaration's pledge that "NATO must be able to field forces that can move quickly *to wherever they are needed*, upon decision by the NAC, to sustain operations over distance and time…to achieve their objectives."[24] The first renamed and reorganized the two strategic commands. The new commands, each led by a US four-star general or flag officer, would hereafter be known as Allied Command Operations (ACO) and Allied Command Transformation (ACT). ACO would be operational, along traditional hierarchy lines of military headquarters, while ACT would be functional, with a responsibility to continue the transformation of military capabilities and promote interoperability of Alliance forces. The second Prague

initiative called for creation of the NATO Response Force, a force of twenty thousand soldiers that would be "technologically advanced, flexible, deployable, interoperable, and sustainable" and serve as a catalyst for promoting improvements in the Alliance's military forces. The third initiative was approval of the Prague Capabilities Commitment (PCC), a more precise rendering of the some of the 1999 Defense Capabilities Initiative items, such as enhancement in the following areas:

- Chemical, biological, radiological and nuclear defense
- Intelligence, surveillance and target acquisition
- Air-to-ground surveillance
- Command, control, and communications
- Combat effectiveness (such as precision guided munitions)
- Strategic airlift and sealift
- Air-to-air refueling
- Deployable combat support and combat service support[25]

The last three items were for out of area missions. And, unlike previous efforts, these PCC items were quantified and precise commitments were sought from member nations. The terms of these commitments were contractual, between each defense minister and NATO military headquarters.

ACT is the hope for NATO transformation and the repository for the Alliance's thinking on the concept. The ACT vision statement clearly summarizes the command's charge as "NATO's forcing agent for change, leading the continuous improvement of Alliance capabilities to uphold NATO's *global security interests*." [26] Several items are notable. ACT is "a forcing agent for change," thus the command will be an active headquarters, striving to alter the status quo within the Alliance. "Continuous improvement" will be sought, which implies that changes need to occur and that this metamorphosis will be positive. The first ACT Commander, Admiral Edmund Giambastiani, told the NATO Defense Ministers in 2003 that "change within NATO has thus far been uneven, inconsistent and uncoordinated--slowing our progress towards the coherently joint [multi-service] and combined [multi-country] expeditionary force our Alliance needs now and in the future."[27] And, the last part of the vision statement boldly proclaims the Alliance will defend its "global security interests."

This ACT logo below is from the strategic command's official website and is quite interesting. Flags of the Alliance's twenty-six nations are shown, to convey NATO's scope, breadth, and unity of purpose. The NATO star is centered in the North Atlantic, but stretches across the entire portion of the visible globe, with the Western Hemisphere and the Eastern Hemisphere both shown. And, interestingly for our purposes, along the right side the Persian Gulf area can just be seen. The next chapter discusses this nexus, and will develop in detail the military requirements for expanding NATO operations in Iraq.

Notes

[1] "NATO Role in Training Iraqi Army Takes Shape," *International Herald Tribune*, 4 October 2004.

[2] The NATO website also tabulates these figures, but it only has figures for the 2003 NATO members. The NATO figures are calculated several different ways (current figures, constant prices) and thus are slightly different than IISS figures. For example, the US percentages range from 3.2-3.4 percent as determined by NATO Headquarters. See http://nato.int/defense_expenditures/index.html.

[3] Gross National Product (GNP) is another economic indicator, and was used by the US Commerce Department through the 1980s. For our purposes, the difference between GNP and GDP is minimal, for the only difference are the assets of non-resident aliens. For the US, the two figures are almost identical.

[4] Robert Kagan, *Of Paradise and Power: American and Europe in the New World Order*, (New York; Alfred A. Knopf, 2003).

[5] This is based on military budgets as calculated by SIPRI, using Purchasing Power Parity figures from the World Bank. See SIPRI, *SIPRI Yearbook 2003*, p. 305.

[6] This issue dates to the very founding of NATO, when the US advocated the new NATO allies to increase defense budgets in return for American military and economic aid. There have also been repeated moves by US politicians to directly link the number of American troops in Europe with European defense budgets, threatening that if European capitals would not increase their defense spending, the US would withdraw troops from the continent. These were attempts to force Europeans to carry a proportional share of defense spending. Specific examples include the Mansfield resolutions of the 1960s and 1970s, the Nunn-Roth Amendment to the 1985 Defense Budget, and the 2000 legislation from the House of Representatives over complete withdrawal of US forces from NATO operations in Kosovo. Most of these, though, were

mere threats that were withdrawn or did not take effect. See Kaplan, *NDNU*, pp. 62-64, 96-97, 133, 146.

[7] SIPRI tabulates military expenditures in local currency, then uses conversion factors to change to US dollars so that worldwide relative rankings can be made. The figures are sensitive to the selection criteria, so two different conversion factors are used. One uses Market Exchange Rates (MER), which is based upon world markets and tends to underrate developing countries (which are not fully exposed to international competition). Another uses Purchasing Power Parity (PPP), which is based upon price comparisons and may under represent more technologically advanced nations (which have easier access to technology).   See SIPRI, *SIPRI Yearbook 2003*, pp. 304-306. A simple example of the PPP method is the Big Mac index used in *The Economist*, where this McDonald's hamburger is purchased around the world in local currency, and the price then converted to dollars using international monetary exchange rates. The result provides PPP, in which a similar basket of goods (or services) is compared across different economies. Ideally, exchange rates should move to equalize the prices of the common product.

[8] This percent was calculated using Market Exchange Rate (MER) figures. See SIPRI, *SIPRI Yearbook 2003*, p. 305, table 10.3. The US portion in forty-three percent. This will be discussed in greater detail in Chapter Five.

[9] As calculated by NATO Headquarters, see http://www.nato.int/issues/defense_expenditures.htm

[10] This group will be joined in 2006 by another NATO unit, the NATO Response Force. For information on this emerging capability, see www.nato.int. For a brief discussion of the concept of NATO forces, see NATO, *NATO Transformed*, p. 15

[11] "NATO Role in Training Iraqi Army Takes Shape," *International Herald Tribune*, 4 October 2004.

[12] See, for instance, Kaplan, *NDNU*, pp. 116-121; also see an article by SACEUR during the period, General Wesley K. Clark, "When Force is Necessary: NATO's Military Response to the Kosovo Crisis," *NATO Review*, Summer 1999; NATO, *NATO Transformed*, pp. 30-32; "Building Peace and Stability in Crisis Regions," *NATO Briefing*, October 2003.

[13] US aircraft flew sixty-five percent, with most of the remainder from the UK and France. The Netherlands, Spain, Germany, Turkey and Italy flew a small number of sorties. For detailed information about the air campaign, see Benjamin S Lambeth, *The Transformation of American Air Power*, (Ithaca; Cornell University Press, 2000), pp. 173-180. This book, which grew out of a RAND study, is especially relevant for it also discusses the political complications and disagreements during this campaign.

[14] See Kaplan, *NDNU*, pp. 124-131.

[15] For details of the air war and the US lessons learned, see Lambeth, *Transformation*, pp. 181-232. Note that all of these areas received particular attention in the 1999 Defense Capabilities Initiative. This will be discussed in a later section of this chapter.

[16] NATO, *NATO Transformed*, pp. 32-33.

[17] NATO Public Diplomacy Division, "Afghanistan," *NATO Briefing*, May 2004.

Notes

[18] Ibid. Concepts from pp. 1-3, training figures from p. 4.

[19] "2 Afghan Missions to Merge," *International Herald Tribune*, 11 February 2005.

[20] For a breakdown of the forces, see http://www.nato.int/docu/update/2004/02-february/e0209b.htm. Data accessed 28 March 2005.

[21] The Washington Declaration, NATO Press Release NAC-S(99)63, 23 April 1999, http://www.nato.int/docu/pr/1999.

[22] Defense Capabilities Initiative, NATO Press Release NAC-S(99)69, 25 April 1999, http://www.nato.int/docu/pr/1999.

[23] Synonyms found in *The Oxford Dictionary and Thesaurus* include modification, metamorphosis, and revolution. Oddly enough, the term transformation does not appear in the US Department of Defense Dictionary, Joint Publication 1-02, *DOD Dictionary of Military and Associated Terms*, as amended through 30 November 2004, nor in the NATO equivalent, AAP-6, *NATO Glossary of Terms and Definitions*, 2005, http://www.nato.int/docu/stanag/aap006/aap6.htm.

[24] Emphasis added. Prague Summit Declaration, NATO Press Release (2002)127, 21 November 2002, http://www.nato.int/docu/pr/2002.

[25] Ibid.

[26] Emphasis added. Quote from the ACT Command Briefing. For this, along with more information about ACT and transformation, see documents within the NATO Multimedia Library at www.act.nato.int/multimedia/products.

[27] Intercession remarks by Admiral Giambastiani, Supreme Allied Commander Transformation, Informal Defense Ministers Meeting, Colorado Springs, Colorado, 8 October 2003, http://www.act.nato.int/multimedia/speeches/2003.

Chapter 5

Conceived NATO Missions in Iraq

Today, the Alliance is supporting the Polish troops leading a multinational division in Iraq's central province…And if the Allies were to decide together that they wish NATO to do more, it will.
Secretary General Jaap de Hoop Scheffer
Speech in Washington, 29 January 2004

This chapter will develop the military components for an expanded NATO mission to Iraq. The goal is to specify the tasks and quantify the forces that would be required, should NATO decide to more fully participate. Again, the overall report follows an "if, then" premise, and this chapter will assess the second portion: *if* NATO diplomats choose to intervene, *then* these are the military requirements that could be necessary. This chapter strives to detail commitments. It will show where NATO forces could be employed, the tasks and forces that would be needed, and how these forces might contribute to the overall mission in Iraq. There are two political questions that are not addressed in this chapter: the political deal making required for consensus, and the probability of this occurring. Both are crucial, but will not be addressed until Chapter Six. Alliance military action is but one possibility that could be used in Iraq, and it is up to the member nations to decide if this action is warranted. But, the Alliance's military tools are relevant and deserve a proper analysis, to show possible contributions that could be made to this conflict. NATO military action is presented here not as a solution, but rather, a possibility.

Previous chapters showed NATO rhetoric on Iraq, the viability of NATO military forces, and the history of NATO out of area action. Political consensus is necessary, but full participation is not. The nations must agree to involve NATO, but each then chooses if and how to contribute. This chapter will specify the figures for heightened NATO involvement, to contribute to the debate over this potential course of action.

Several fundamental points emerged during research interviews conducted at NATO Headquarters in the fall of 2004. These break out into three issues could best be viewed as prerequisites for any agreement on unified NATO action in Iraq. First, several layers of NATO officials mentioned that, if involved, the Alliance should obtain a clear and prominent role. If NATO is to contribute, it should be visible. This would stress to Iraqis

the unanimity of the Alliance, and also help national leaders deflect any public criticism about the involvement of their nation's forces. Being under NATO command would elevate the status of national contributions. The mere act of changing flags from the Coalition to NATO would substantially legitimize the political, economic, and military contribution made by each nation. The perceptions of citizens in Iraq and NATO would shift to a larger political arena, and extend greater legitimacy to the occupation. The second prerequisite is closely related: NATO must make a meaningful contribution. NATO forces should be involved in significant missions, to prove their mettle and justify their sacrifices. NATO forces should be prepared for the full range of missions, and be ready to apply their considerable experience to accomplish these tasks. A caveat was stated, though, with the next prerequisite. Initially, these forces should be employed in a relatively safe area. This would allow the military and polity to phase-in to the commitments. A common refrain was that, "In NATO, success breeds success." Begin with missions that have a high probability of effective completion. The last precondition was to ensure a smooth handover of responsibilities. Forces are already operating across Iraq; any changeover of command should be quick and effective. This would add to the perception of NATO efficiency and minimize potential changes in the operating area. So, four preconditions were stated. Any NATO action would need to be visible, meaningful, relatively safe, and allow a smooth transition. This chapter seeks to articulate just such an operation.[1]

TRAINING TASKS

As described in Chapter Two, the NATO Training Mission Iraq is already in the country, and has begun the task of training the Iraqi security forces. When this team first deployed in November 2004 it consisted of fifty people. The NAC decision of December 2004 authorized the force to grow six-fold by early 2005. In addition, NATO will establish an Iraqi Training, Education and Doctrine Centre (TEDC) in Ar Rustamiyah, at the Iraqi Military Academy near Baghdad, which will be a "center of excellence" for preparing mid- and senior managers for leadership positions. Iraqi officers have also participated in formal NATO staff officer courses at the NATO School in Oberammergau, Germany, and the Joint Warfare Center in Stavanger, Norway.[2] NATO is contributing, and this effort is important.

However, there has been some apprehension expressed by NATO officials about these arrangements. The fear is that when NATO begins training, America will reassign its trainers to other tasks. NATO training commitments would then merely substitute for those of the United States. The concern is that with NATO involved in these less risky missions, the Americans could move on to other, more demanding tasks. Some NATO officials want NATO to be made a true partner, not merely an adjunct. NATO officials would like the Alliance to be accepted a viable participant, not for the separate nations to be used as a toolbox for particular capabilities.

In late 2004, several versions of a lament were expressed around NATO Headquarters, paraphrased as, "The United States wants to do the cooking, then merely asks NATO to clean the dishes." Though the saying is rather amusing, and the fear genuine, it is inaccurate on both counts. Thus far, of course, the US has done the major military operations, but there was no NATO consensus to participate until NTM-I. With NATO's assistance, the critical missions of training Iraqi security forces and military officers will proceed at a faster pace. The existing Coalition will continue to train these forces. NATO's efforts will speed the training, both the pace and the overall numbers. In both areas, training is, and will remain, a very significant task.

Since May 2003, the Iraqi government's indigenous forces with combat capability have grown eighteen-fold. However, as Table 5.1 shows, this is still only about halfway to the stated goals in each specific area:

Table 5.1 Iraqi Security Forces on Duty

	Police	National Guard	Armed Forces	Border Patrol	Total
May 2003	~8,000	n/a	(disbanded)	n/a	~8,000
January 2005	59,000	37,000	15,000	15,000	125,000
Stated Goal	142,000	62,000	37,000	29,000	273,000

Sources: Widely varied, but all collected and cited in Brookings, *Iraq Index,* accessed 14 April 2005.
Notes: forces rounded to nearest thousand. Stated goals for first three columns revised upward in June 2004. Numbers are available for April 2005, and show an increase of 28,000 over those listed for January 2005. However, the recent figures do not separate the forces by component.

The training time varies, based on the type of force. Basic training, also known as boot camp, is about two weeks for a typical National Guard member. The higher-level security forces require a minimum of sixteen weeks for learning basic skills.[3] With NATO's assistance and expertise, the Iraqi forces could be trained and certified more quickly. But the United States must also honor its commitments to the Alliance. US forces comprise about one-fourth of NATO's manpower pool, and America should contribute its proportional share. US personnel, working under NATO auspices, should also be training Iraqi forces for the Alliance.

The missions and tasks undertaken thus far by NATO are critical for the stability of Iraq. NATO will play a central role, delivering essential training and capabilities to the newly formed Iraqi nation. NATO's commitments are very important, both by function and by the display of international support. However, the Alliance could certainly do more. The remainder of this chapter will show how NATO could perform a more substantial mission in Iraq.

SECTOR ASSIGNMENT

The Republic of Iraq spans just over 437,000 square kilometers, and is separated into eighteen administrative divisions, known as governorates (as well as provinces or, in Arabic, *muhafazah*). Each governorate is assigned to military divisions within the Coalition, with the following breakdowns among lead nations:

Table 5.2 Iraqi Governorates and Lead Nations

Lead nation	General location	Governorates Assigned
US	North	Dahuk, Arbil, Ninawa, At Ta'mim, As Sulaymaniyah, Al Anbar, Salah ad Din, Diyala, Baghdad
Poland	Middle	An Najaf, Al Qadisiyah, Babil, Wasit, Karbala
UK	South	Al Muthanna, Dhi Qar, Maysan, Al Basrah

Statistically, most of these regions are relatively peaceful for Coalition troops. Nation-wide, attacks on Coalition forces have been over two thousand per month since the summer of 2004, yet within fourteen of the governorates there have been on average only four attacks per month on Coalition forces.[4]

All of the violent governorates are assigned to American forces. The estimated strength of the insurgency throughout Iraq is sixteen thousand, and judging by Coalition fatalities, the highest concentration of these forces is within the region that has been labeled by some as the Sunni Triangle, an area bounded by the cities of Tikrit, Ar Ramadi, and Baghdad.[5] Within that region, the most violence occurs in urban areas, where insurgents can move more freely by blending in with the local population. The bulk of Coalition deaths have occurred within cities in four governorates:

Figure 5.1 Iraq Political Map.

Table 5.3 Urban Locations with Highest Coalition Fatalities, May 2003-April 2005

Governorate	City	Lead Nation	Military Fatalities
Baghdad	Baghdad	US	299
Al-Anbar	Fallujah	US	116
Ninawa	Mosul	US	95
Al-Anbar	Ramadi	US	80
Salah ad Din	Balad	US	38
Salah ad Din	Samarra	US	34
Salah ad Din	Tikrit	US	19
Total			681

Source: Brookings, *Iraq Index*, accessed 12 March and 12 April 2005. The figures for Salah ad Din are for through January 2005. For a map of Iraq with an overlay of the current military units assigned, see http://www.globalsecurity.org.

The period above is only for the occupation period, and is current as of 3 April 2005.[6] Six of the seven cities listed are within the Sunni Triangle (see appendix for map). The hot zone in Iraq is extremely concentrated.

Beyond the American units, there were also casualties among Coalition troops in Iraq. Fifteen other Coalition nations lost lives, for a total of 177 soldiers killed since March 2003. Eleven NATO nations have thus far lost soldiers.[7] Alliance members have already committed troops and have sacrificed some of these soldiers for the future of Iraq. The President of Iraq, Jalal Talabani, wrote of this in a letter to *The Wall Street Journal* on 11 April 2005: "As we look ahead to a new Iraq based on tolerance and equality, federalism and unity, democracy and freedom, we remember those whose sacrifice made this possible--Iraqis, Americans, Britons, Poles, Italians, Czechs, and many others from around the world."[8] Beyond his own country, every nation mentioned is a member of NATO, but not a single soldier who died had been serving under the NATO flag.

With these known risks, in order to achieve political consensus with the NAC it would probably require the assignment of a NATO zone that is less dangerous.[9] For NATO to succeed, a more pacified region should be given, at least at first.[10] This would allow NATO troops to test their equipment, prove their level of interoperability, and gain the necessary awareness, confidence, experience, and skills.

NATO should be given sectors within Iraq, and within these areas the Alliance should have complete control over tactical responsibilities. The most obvious choice would be for NATO to assume responsibilities from the Polish Division in the central-south region of the country. There are several advantages to this choice. NATO has experience in this region, for the Alliance has fulfilled a support role since 2003. Eight Coalition nations in this zone are from NATO countries; another six NATO nations are in the provinces just to the south.[11] Further, this region is quite central, with US units to the north and UK units to the south. It is also touches the Baghdad province, where NATO soldiers are training Iraqi military officers and security forces. Should NATO leaders choose to expand the missions of the Alliance forces in Iraq, this is where is should occur.

REQUIREMENTS DETERMINATION[12]

NATO has a formal process for determining military requirements, which is known as the Defense Requirements Review (DRR). The goal of the DRR is to show the explicit reasoning behind detailed force structure decisions. The process begins with a review of all guiding documents, such as intelligence estimates, Ministerial Guidance from the NAC, strategic guidance from the Military Committee, and detailed military guidance from the two strategic commands. Military and civilian experts form a litany of functional teams to conduct the DRR. The actual DRR is an eighteen-month process, which is controlled by ACT and shepherded by NC3A scientists. It far exceeds the scope here, but some unclassified methodological elements will enhance the focus of this report. The purpose of this section is to sketch the DRR process, and use some of its elements to provide a general outline of NATO forces that could be needed for an expanded mission in Iraq.

Before proceeding, though, some caveats should be made clear. At this time, the Alliance is not considering expanded operations in Iraq. Currently, NATO analysts are not calculating the required forces. However, NATO does have an approved process for determining very precise military requirements. Should the NAC decide to consider the possibility of a greater role in Iraq, the DRR provides a mechanism by which NATO forces could be determined. What follows is an abbreviated version of the DRR, a quick presentation to show some of the decisions, assumptions, considerations and figures for a broader NATO commitment in Iraq.

The DRR uses a capability-based planning process; in other words, a functional analysis is conducted, based on required military tasks.[13] There are several major steps involved in the process, which can be briefly described as follows:

Table 5.4 NATO DRR Analytical Process

Step	Methodological Action
1	Agreement on assumptions and principles
2	Identification of military mission types
3	Specification of planning situations
4	Determination of generic requirements
5	Preparation of national forces list
6	Determination of benchmark combinations for all NATO forces
7	Specification of final force pool

Source: NC3A, The DRR Analytical Process, Overview Document, version 1.0, [NATO Unclassified]

For our purposes, abbreviated versions of steps 2 and 4 will be used.

During step 2 of the DRR, NATO analysts select basic mission types for a potential operation. Currently, Coalition forces in Iraq are performing two basic mission types used in the DRR: Enforcement Operations--Counter Terrorism (in NATO parlance, known as CT) and Peace Enforcement (PE). CT operations seek to eliminate terrorist

havens in a potential failed state setting, and may occur in regions beyond those specified in Article 6 of the Washington Treaty. PE seeks to restore order in a similar situation, with a goal of restoring regional stability amid refugee problems, damaged economic interests, and terrorism. Both of these mission types involve generic elements, although CT does require some specificity for determining precise figures. For simplicity, and to better illustrate the requirements determination process, only PE will be selected. The PE mission type includes elements of counter-terrorism, and allows a broader assessment of potential NATO operations in the mid-Iraq region.

Next, a framework scenario is built, to outline the military mission type and describe the geographic operating area. The term "scenario" has a precise meaning among NATO analysts, and is used to describe a thought construct for military planning, with the purpose of deriving force structures from potential courses of action.[14] Some detailed scenarios may be politically sensitive within NATO, due to the precise operational areas and military missions, however they are beneficial for force planning. Using a particular region in mid-Iraq makes this a detailed scenario. With precise knowledge of a given area, more applicable calculations can be made. Opposition forces and capabilities can be integrated into the analysis, operating areas can be bounded and assessed, and relevant historical data can be added.[15] In force planning terms, this framework scenario will send Alliance forces on a Peace Enforcement operation to Iraq, to ensure peace, stability, and security in the middle region of the country. This mission would obviously be considered an out of area operation for NATO.

The proposed NATO area of responsibility includes the governorates of An Najaf, Al Qadisiyah, Babil, Karbala, and Wasit. Each has a major city, which serves as the provincial capital. Physically, this region is primarily an alluvial plain, bounded by the Tigris and Euphrates rivers. The delta between the rivers is a heavily silted region, with flood plains cut by irrigation canals and channels. Flooding greatly alters the characteristics of the region, with the high water mark in spring forty times the low water mark in the fall. East of the Tigris is a permanent marshland.[16] As mentioned, the Polish-led Division is already operating in this region, along with troops from seven other NATO countries.

As scripted, a PE operation typically has two phases. The enforcement phase is direct combat, and involves medium- to large-scale sustained offensive ground operations against known opponents. In Iraq, this phase formally took place during the initial period of Operation Iraqi Freedom, which occurred from the invasion of 19 March 2003 until the announced cessation of major combat activities on 30 April 2003.[17] The second PE phase is stabilization, which seeks to restore peace and prosperity to the affected region. This is the current situation in the potential NATO area of operations.

Step 4 of the DRR analytical process determines generic requirements.[18] This step will derive a comprehensive set of military tasks to be performed. To do this requires a sequential series of components, to create a task hierarchy for NATO forces. The mission (known in NATO political terms as "the mandate") has been given previously (PE-Stabilization in Iraq). The next element is the mission essential component, which

describes the high-level task. This should be broad and time independent; here, the mission essential component will be to defend vital interests of the Alliance. Next is the operational objective, which expresses the military commander's intent and is dependent upon the prescribed course of action chosen by this leader. For illustrative purposes, Alliance forces will be assigned to dominate the NATO area of operations within Iraq. Next is a written operational objective specification, which is a decomposition of the previous component. Here, NATO forces will seek to maintain tactical control within each of the five governorates. Finally, key tasks can be listed, which will allow NATO forces to successfully perform the prescribed mission.

The stabilization phase of this NATO PE mission in Iraq would have four key tasks: patrolling, deterrence, border security, and monitoring lines of communication. Each key task is governed by force allocation rules, which are tools used in operations research to assign specific numbers of military forces. For ease of comparison, a battalion will serve as the standard military unit within the force allocation rules. The size of a battalion varies, depending on a number of factors (such as its purpose, equipment, nationality, and command structure). For simplicity, this study will use a figure of 750 personnel for the standard size of a NATO generic battalion.[19] Each of these key tasks will now be examined to derive generic NATO force requirements.[20]

Patrolling would be the primary task within the area of operations, and would consume about eighty percent of the time and resources of this NATO deployment. Several operational models already exist for this task. The longest and most quantified is the UK experience in Northern Ireland. In that location, the preferred method is to rely primarily on the presence and capabilities of local police, to project a visible indication of stability. Military formations, particularly when large, heavily armed, or riding in armored vehicles, project an image of occupation. Small military patrols would be used, typically dismounted, on foot. This would increase interaction with the local population, build trust, and provide the opportunity for the most accurate and useful field intelligence about the situation.

Another model is Bosnia, which involved NATO forces and could be a useful template for similar operations.[21] The NATO lessons learned from Bosnia include tracking indices, which produced precise figures and correlations among a number of variables. This is basic police work, to monitor a series of quantifiable incidents within a prescribed area. For instance, the level of violence in particular locations can be separated into low-level criminality and explicit attacks against Coalition forces.[22] An overlay can then be made, showing the timing and locations of the violence with the size, routes, and frequency of police and military patrols. Trends can then be developed, and patrols adjusted to directly influence more positive outcomes. Obviously, Iraq itself is another example and the current experiences among units in the Polish-led Multinational Division can be quickly integrated into any future NATO operations. Operational intelligence would thus be available about the areas, populace, and insurgency. Successful patrol tactics already exist, and many soldiers from NATO nations have already participated.

Available, but primarily behind the scenes, would be heavy military capabilities (such as tanks and armored vehicles). These forces would be used whenever smaller units needed additional support, and also during the build up and conduct of high-profile events (such as elections, protests, and significant anniversaries). For ease of operations and for security purposes, this heavy equipment would be kept in garrisons. Protecting these fixed locations would be a challenge, for they are easily distinguished and have clear perimeters. Force protection would be paramount. This capability is needed, but, in the words of one analyst, "a balancing point" must be maintained between light patrols and heavy follow-on forces. As in previous NATO operations, local commanders would need the immediate authority to direct heavy forces to best accomplish their mission.

The number of patrols would closely conform to regional demographics within the five governorates:

Table 5.5 Statistics of Selected Iraqi Governorates

Governorate	Area (km^2)	Provincial Population	Capital City	Capital Population
Babil	6,648	1,182,000	Al Hillah	286,321
An Najaf	28,824	775,000	An Najaf	410,000
Al Qadisiyah	8,153	751,000	Ad Diwaniyah	263,754
Wasit	17,153	784,000	Al Kut	254,210
Karbala	5,034	594,000	Karbala	380,000
Total	65,812	4,086,000	--	--

Notes: Population figures from 1996 census, rounded to nearest one thousand. Capital population figures include provincial population.

These five provinces represent fifteen percent of the total area of Iraq, and nineteen percent of its population. In four of the governorates, the capital cities represent the only major urban areas. Wasit has a second major city, Al Hayy, and it will be considered in the subsequent calculations.

Terrain will also be used to determine the particular type of patrol battalion. All battalions will be primarily infantry soldiers, and each unit will consist of a dismounted part that has small arms, machine guns, and light anti-armor weapons. These infantry battalions will be classified based on their means of transport: mechanized (vehicles with treaded tracks and armor, such as tanks), motorized (predominately trucks and other wheeled vehicles), or light (mainly foot soldiers). The sample force allocation rules use ratios based on local populations to determine the unit size necessary for patrolling. In rural areas (defined as less than fifty citizens per square kilometer), one infantry battalion will be assigned for every half million people. For the more populated and higher risk urban regions, one battalion will be assigned for every ten thousand people.

The second task is deterrence. In this scenario there are no external threats, only internal threats from insurgents. As stated previously, the insurgent violence is centered in urban areas of the Sunni Triangle, and thus not in the operational area proposed for NATO. But, insurgent tactics in the more dangerous areas can serve as a marker to enable NATO to better protect its forces. The causes of death among US forces can be examined, to

provide a snapshot of the highest risks that may be faced by NATO troops. Within the US area of responsibility in Iraq, the most frequent causes of combat deaths during the occupation have been hostile fire from small caliber weapons (26%), homemade bombs (23%, also known as Improvised Explosive Devices), rocket propelled grenades (4%), mortar attacks (4%), and car bombs (4%). Mass casualty bombings (those that kill or injure more than two people) are a particular concern because of the tactics; suicide bombers have carried out almost two-thirds of these attacks.[23]

The force allocation rules designed for deterrence have two elements. One is a response to each incident, and the other is to counter a perceived threat. Whenever a roadside bombing, sniper attack, or other event occurs, the local commanders should have immediate access to a NATO force of at least brigade size. This is, nominally, about one-fourth of a battalion (roughly 160 troops).[24] Additionally, to respond quickly to counter a threat, units would also desire tactical air support, both fixed wing and rotor wing aircraft. The standard NATO tactical fighters for close air support and air interdiction are the F-16C and the Tornado IDS. They each carry an assortment of weapons, such as the 20 mm gun, heat-seeking missiles, and bombs (many with precision and laser guidance). Both aircraft are held in large quantity across the Alliance. Ideally, two types of helicopters would also be used: lightly armed transports (known as air mobility) and heavily armed attack helicopters. Additionally, a collection of airborne sensors will also be used for a broad assortment of detection. The platforms would vary (satellites, manned aircraft, and unmanned aerial vehicles), but capabilities would include infrared, synthetic aperture radar (for detecting location), and ground moving target indicators (for vector and movement tracking).

The third military task is external border security. This is to retain the integrity of the national boundaries, largely to prevent the movement of insurgents. Formal border crossing zones would require support from military forces. Additionally, reconnaissance should occur throughout the border regions, to ensure proper use of the crossings and to actively monitor for any illegal activities. The edges of the NATO-assigned zone would have international borders that must be protected. Force allocation rules call for overlapping coverage among units assigned border security. One mechanized battalion would be used for every three border crossing locations, with a maximum operating area of thirty kilometers. In addition, one battalion would be used every 150 kilometers, for reconnaissance of the larger border areas.

The fourth military task is to secure and monitor lines of communication. This would ensure the uninterrupted safety of all support, supplies, and communications for friendly forces. This would also entail protection of key infrastructure, such as oil facilities and pipelines.

There may also be new ways to use aerial and space platforms in certain missions to reduce the number of ground troops. Some aspects of deterrence, border security, and lines of communication can be performed with, or even solely by, satellites, manned aircraft, and unmanned drones. Multiple sensors, wide survey areas, extended range, and long duration allow some of these vehicles to enhance security without an increase in

manpower. If properly integrated, these platforms may be able to substitute for soldiers and actually enhance the mission effectiveness of certain tasks.[25]

Then, using all of the information described above produces a precise quantification of the numbers necessary to perform the described military tasks. Fulfilling these tasks means performing the military missions successfully. This would entail not only NATO consensus to begin military operations, but sustainment of the unanimity throughout the campaign. Kosovo revealed the limits and sharp edges of NATO's political methodology during a sustained military campaign. As described in Chapter Two, consensus is not a goal, but a requirement for the use of NATO forces. But, if the political will existed, then this is an estimate of the Alliance forces that would be needed.

Table 5.6 Estimated NATO requirements (combat battalions)

Province	Mechanized Infantry	Motorized Infantry	Light Infantry	Total
Babil	.41	0	1.24	1.65
An-Najaf	.64	0	1.91	2.55
Al Qadisiyah	.45	.45	.91	1.81
Wasit	.64	.89	1.17	2.70
Karbala	.39	0	1.13	1.52
Totals	2.53	1.34	6.36	10.23

Source: From discussion with NC3A scientists, The Hague, Netherlands, November 2004.
Note: Sample data for illustrative purposes only.

Just over ten combat battalions. With a generic battalion of 750, the figures above represent a total of 7,673 combat troops. These are the soldiers that will be directly facing danger.

Beyond this, though, will be a significant collection of additional forces. These are additional troops that provide all the necessary support for combat. Included would be such units as command, medical, signals, maintenance, communications, logistics, transportation, personnel, and training.[26] Typically, there is a "teeth-to-tail" force ratio of one-to-two for combat and combat support troops. So, very broadly, to perform the missions described would require almost twenty-three thousand NATO troops.

It is beyond the scope of this analysis to weigh the political will for such an operation. However, some observations can be made about the broad possibility of expanding NATO's commitment in Iraq. First, NATO is already involved with training Iraqi forces, in Iraq, in neighboring Persian Gulf nations, and at NATO facilities in Europe. Second, national forces of NATO nations are already members of the Coalition in Iraq. Sixteen thousand were there in November 2004. And, third, to make the NATO mission more appealing, further political deals might be necessary among NATO members, particularly between the US and the two major nations that opposed the war, France and Germany. This matter will be discussed briefly in the last chapter.

The purpose here was to sketch a methodology for determining the required military forces. Of course, the figures above are only a rough estimate. However, they do give

approximate numbers and types of military units that could be needed, should NATO expand its operations in Iraq. If this decision were made, theory would give way to practice. Force planning provided an estimate, but operational planners would then build their own requirements. Specific phases would be designed, so that unit requirements could be quantified by time and task. This will not be simulated here, for far too many items are situational dependent, such as the season, actual location, local intelligence estimates, and specific unit equipment. However, once the operational requirements are defined by the military headquarters, accepted by the Military Committee, and approved by the NAC, the next step is to generate units from the NATO pool of forces.

FORCE GENERATION

Like most NATO activities, force generation is a negotiated process. High-level meetings are held and deals are proposed in proverbial smoke filled rooms at Alliance Headquarters. As mentioned previously, not all nations need to participate in approved NATO operations. Individual member nations choose if, when, and how to contribute to any NATO operation. But, the detailed force listings need to be filled, so the Alliance can deliver military capabilities to match its political ambitions.

Specific national units often differ from the generic units described above. Capabilities, sizes, and equipment of real world units would need to be analyzed in great detail, so that the listed requirements could be adjusted as actual units are committed. Here, analysts use computer-assisted tools to adjust the force tables as specific military requirements are offered by nations.

A major factor in this step is national constraints placed on the use of military forces. Constitutional limits may exist (such as with the use of German forces), Parliamentary approval may be needed (with the Dutch forces, for instance), and contractual limits may be imposed (several nations will not deploy conscripts beyond national borders). These caveats need to be strictly stated and understood, so that analysts can tabulate specific metrics on the list of national forces.

Money is another significant limitation to the availability of national forces. By current NATO protocol, the sending nation incurs all costs associated with transportation and sustainment of its forces to a deployed area. One NATO ambassador, a veteran of force generation conferences, mentioned that in his experience, "When they say it's not the money, it's the money."[27] Deployed costs are thus a major consideration for many nations, particularly the smaller ones, for the money necessary to support even a modest contingent abroad can exceed their annual military budget. This needs to be addressed by the wider NATO bodies. In some circumstances, it may be possible to use NATO financial offsets to alleviate these matters for individual nations.[28]

Notes

[1] This chapter seeks to develop specific military requirements in a NATO context. For the broader military tasks necessary in Iraq, along with an historical perspective on

occupation and rebuilding a country, see Conrad C. Crane and W. Andrew Terrill. "Reconstructing Iraq: Insights, Challenges,
 and Missions for Military Forces in a Post-Conflict Scenario." Strategic Studies Institute, US Army War College, February 2003.

    [2] "NATO School Completes Iraqi Officer Training," http://www.natoschool-shape, 15 November 2004.

    [3] Peter Khalil, "In Iraq, Less Can Be More," The New York Times, 20 December 2004. Reprinted at http://www.brookings.edu/views/op-ed/fellows/khalil20041220.htm.

    [4] Figures show the lowest number of attacks in February 2004 (410) and the highest number in August 2004 (2,700). Brookings, *Iraq Index*, accessed 12 March 2005.   Four per month figure from *The Economist*, "Iraq: When deadly force bumps into hearts and minds," 1 January 2005, pp. 30-32.

    [5] For estimates of insurgents within Iraq, see Brookings, *Iraq Index*, the section Security Indicators includes a table titled 'Estimated Strength of Insurgency Nationwide,' which provides a discussion and multiple analysis sources.   The description of the Sunni triangle varies a bit depending on the source. By most, it is a region as described above. See appendix for map.

    [6] Since the invasion began on 19 March 2003 through 10 April 2005, the US forces in Iraq have had 1,545 soldiers killed and 11,664 wounded. The killed to wounded ratio is very high by historical standards. Much of this is attributed to modern advances in combat evacuation, forward-placed military hospitals, and body armor.

    [7] Those NATO participants in the Coalition that have suffered fatalities are Bulgaria, Denmark, Estonia, Hungary, Italy, Latvia, the Netherlands, Poland, Slovakia, Spain, and the UK. Of these, the UK has the most, with about half of the non-US Coalition deaths.

    [8] Jalal Talabani, "In Iraqis We Trust," *The Wall Street Journal*, 11 April 2005, pp. 22.

    [9] Lord Robertson also stated this in a 2004 editorial, "Friends Again," *The Wall Street Journal Europe*, 10 November 2004, p. A8.

    [10] This point was stressed to the author numerous times during a research visit to NATO Headquarters in November 2004.

    [11] For lists of the NATO members serving with the Polish and UK divisions, see Chapter One.

    [12] I am very grateful to several NC3A scientists for sharing their time and expertise during preparation of this section. John Vink and Alan Campbell provided information on the DRR process, while Bruce Tanner and Phil Sayer discussed the myriad details necessary for calculating the military force requirements.

    [13] Included in this overarching planning process are also elements of threat-based planning, top-down planning, and scenario-based planning. NATO analysts also describe several other types of military planning processes which are not used by the Alliance: incremental, risk avoidance, technology-driven, historical extension, and budget-based. NC3A, The DRR Analytical Process, Overview Document, version 1.0, dated January 2004, [NATO Unclassified], pp. 4-5.

    [14] A similar term used by NATO analysts is "planning situation." Scenarios tend to be more specific. Detailed scenarios are often used in military war games to determine

Notes

precise figures and courses of action in theoretical situations. A planning situation is often less defined, allowing broader acceptance of politically sensitive topics or locations. This paper will use the term scenario. For discussion of the terms and concepts, see NC3A, DRR Analytical Process, Overview Document, Annex B.

[15] This framework scenario will be rather generic, meaning it will offer a geographic region and a broad mission. A specific framework scenario would require the addition of NATO-approved intelligence information. Of course, this would be needed before the Alliance would agree to deploy forces. This information, however, is beyond the scope of this report and is not necessary for the illustrative purposes desired here.

[16] For more details on Iraq, see Library of Congress, http://www.countrystudies.us/iraq.

[17] Since then, there have been two offensive operations in Fallujah which could be considered enforcement. But, these assaults were in US-controlled regions and did not involve forces from NATO nations.

[18] Step 3 (planning situations) is too precise and will not be used here. It involves conceptualization of sets of planning situations and applicable areas. These are modeled in great detail, then used later in step 6 (benchmark combinations) to ensure that NATO military forces can fulfill the political ambitions of the NAC.

[19] This approximates the size of a typical NATO battalion that might participate in a similar operation. The personnel assigned to a battalion vary from a low of 500 (engineering construction) to a high of 835 (mechanized infantry). An infantry unit designed for urban combat has 750. For more details on the size, capability, and equipment of battalions within NATO nations, see SIPRI, *SIPRI Yearbook 2004.*

[20] For simplicity, several methodological sub-steps used in the DRR process will not be described. For instance, NATO analysts derive a Joint Activity Trees to ensure the integration of forces from different military services. Such details are beyond the scope of this report.

[21] Lord Robertson wrote that Bosnia should serve as the model for an increased NATO role in Iraq. "Friends Again," *The Wall Street Journal Europe*, 10 November 2004, p. A8.

[22] Low-level criminality can be quite significant. The Brookings Institution estimates that the annualized murder rate in Baghdad is 77 per 100,000--thus 5,744 people died in the capital each year as a result of crime. And the figures for late 2004 climbed to 90. Brookings Institution, *Iraq Index*, chart 'Crime Related Deaths in Baghdad Since May 2003.'

[23] Brookings, *Iraq Index*, accessed 15 March and 12 April 2005. The last two causes were not listed in April.

[24] The overall battalion figures include those assigned to headquarters, and are not included in the ranks of each brigade.

[25] This area is being explored by Colonel (retired) Robyn Read at the Air University, Maxwell Air Force Base, Alabama. I am grateful to Dr Dan Mortensen for bringing this to my attention.

[26] For an itemized list of Coalition units such as this that are in Iraq right now, see http://www.globalsecurity.org.

Notes

[27] Personal interview, NATO Headquarters, November 2004.

[28] NATO uses various monetary sources to fund its operations. The details are beyond the scope of this report, but should be further examined early in any discussion about sending a large number of NATO troops to Iraq. SACUER raised this point, as well, see "NATO Role in Training Iraqi Army Takes Shape," *International Herald Tribune*, 4 October 2004.

Chapter 6

Consequences and Implications

The NATO Alliance was founded in 1949 to ensure that the fragile democracies of post-war Europe had a decent chance for survival. Now, more that 55 years later, the allies have come to realize that our security depends on the survival of peace and democracy in areas beyond our borders. The stakes are high in Iraq and Afghanistan. As NATO preserved democracy during the Cold War, so we now have that same opportunity and obligation to help secure a peaceful and hopefully democratic future for the people of Iraq and Afghanistan. We must help these countries become places of progress and peace, so they will not again become exporters of violence and terror. I'm proud to say that with its new mission in Iraq, NATO will demonstrate once again that multilateralism works.

—R. Nicholas Burns, US Ambassador to NATO
6 October 2004[1]

This chapter begins with an assessment of how this mission could materialize, by briefly examining what might be needed to gain NATO consensus. The next two sections summarize the main themes of the report. What follows is merely an outline, to sketch the elements of the thesis discussed earlier. For further clarification and specific documentation, the reader in directed to earlier chapters.

POSSIBILITY OF NATO ACTION

A conference titled "Global NATO?" was held in October 2004, and Secretary General Jaap de Hoop Scheffer spoke of several issues which are useful here. He advocated that NATO shift from a geographic concept of security to a functional approach. Previously, he recounted, the Alliance tended to divide security challenges into "near (serious) and far (not so serious)," but "in an age characterized by terrorism, the spread of weapons of mass destruction, and failing states, that distinction is no longer sustainable." He then outlined three basic conditions, which he feels must be met for NATO to successfully conduct and sustain out of area operations:

- Clear understanding of the nature of the threats
- Match political ends with military means
- Develop closer links with other international institutions[2]

These three items can serve as tools for assessing the validity of this proposal and the possibility of it occurring.

The nature of the threat in Iraq is not universally agreed across the NATO membership. This springs from differing views of the conflict. To some, Iraq today is largely a problem created by the United States. The United States invaded Iraq and, to some, must now bear the consequences of dealing with pacifying and rebuilding the country. The "Wal-Mart premise," as Colin Powell once called the position, meaning whatever you break, you buy. An element of *schadenfreude* may exist among national leaders who opposed the war, particularly Germany and France. By this view, insurgent actions in Iraq, in particular those aimed at American forces, may not meet their definition of terrorism. However, this view may be losing support, as the potential consequences of failure in Iraq have become more apparent. Should the insurgents succeed in their campaign of intimidation and violence, preventing democracy from taking hold in the country, the impact will be felt across NATO and the wider world community. As Lord Robertson chided European leaders, "Won't the shock waves of failure in Iraq hit Berlin and Paris before Wisconsin or Iowa?" The need to refute the methods of insurgents and nurture democracy appears to be gaining broader political backing. Hopefully, this will continue. This report has cited statements by the NAC, the current and previous NATO Secretary General, and Iraqi leaders which all stress the importance of defeating insurgency in Iraq and helping to build a secure, democratic society.

Matching political ends with military means will remain challenging. NATO's political pledges must be followed by distinct, quantified, capable military commitments. If not, the credibility of the Alliance will suffer. The subtitle of this report sprang from this exact issue. *Factis Non Verbis* is Latin, meaning "by deeds, not words." Even a cursory review of Chapter One's section 'Decisions on Iraq,' will show that grand political pronouncements have already been made by the Alliance. The North Atlantic Council issued a formal statement at the Istanbul Summit in June 2004, and some excerpts show the ringing commitment proclaimed towards progress in Iraq:

> We, the twenty-six heads of state and government of the nations of the Atlantic Alliance…declare our full support for the independence, sovereignty, unity and territorial integrity of Iraq and for strengthening of freedom, democracy, human rights, rule of law, and security for all the Iraqi people…We pledge our full support for the effective implementation of UNSCR 1546…We are united in our support for the Iraqi people and offer full cooperation to the new sovereign Interim Government.[3]

Thus far, though, little has actually followed this declaration. The touted "full support" and "full cooperation" materialized into only a modest pledge to assist with the training of security forces. The NATO Alliance, with several million soldiers, dispatched only sixty to Iraq. These soldiers are sequestered safely within the confines of the Green Zone of Baghdad. And, it took a long time: declaration to deployment was over five months. Politically, a bit more has taken place since then. The NAC authorized a six-fold expansion of NATO soldiers, and Iraqi officers have attended classes, courses, and

programs run by NATO. Good, but still paltry. When at the fully authorized strength, the formal NATO commitment will comprise 0.0017 percent of the troops in the Coalition. Not quite two-thousandth of one percent. NATO deeds need to match its words.

The third condition offered by the Secretary General, closer links between NATO and other international institutions, may allow the Alliance to overcome some of its hesitancy. There may be a means for satisfying reservations among Alliance members and, perhaps, permit a NATO consensus to commit more fully in Iraq. Rather than endlessly debating the issue at NATO Headquarters, other institutions could be approached for political support and endorsement of increased NATO participation. Article 5 of the North Atlantic Treaty specifically mentions the United Nations and the UN Security Council. An option would be to revisit the matter with bodies in the United Nations. Not only could this lead to heightened NATO action, it would validate the purpose and mechanisms of the United Nations. For some NATO members, this is viewed as a necessary path to justify the use of force anywhere in the world. These options are worth re-exploring. This is not merely an issue for American diplomats; the matter directly concerns Coalition partners and, most importantly, Iraq. Iraqi diplomats should fully participate and, perhaps, would be the best group to initiate the process. If successful, this may add another level of legitimacy to further NATO involvement in Iraq.

The European Union can also be approached. As described in Chapter Four, EU military forces have replaced NATO forces in Bosnia and Kosovo. There may be a way to appeal to different European sensibilities, organizations, and nations. Nineteen NATO members are also in the European Union (along with six other European nations). The EU is seeking to strengthen its military capabilities, and many NATO forces are pledged concurrently to both organizations. There may be a way to satisfy some specific areas of the European Union's Berlin Plus goals through increased NATO participation in Iraq. An expanded NATO operation in Iraq could enhance military capabilities of European forces that are also pledged to the European Union. This would endorse the political legitimacy of the European Union, as well as heighten its military capability. European forces and sentiments would benefit, as would NATO.

Additionally, nineteen NATO nations are also members of the Organization for Economic Cooperation and Development. This would offer another forum for stressing common interests. Here, Iraqi and Coalition diplomats could stress the economic bonds among OECD members and the value of the fluid fossil fuel resources in Iraq and the Persian Gulf. These common interests could contribute, indirectly, to the possibility of additional NATO military commitments.

But these are all merely diplomatic tactics. National leaders must be convinced to agree and to intervene. Three factors should be stressed to achieve this consensus: the benefits to Iraq, to individual NATO members, and to the Alliance as a whole. These matters should be stressed to the Alliance members in order. Each will now be briefly addressed, with salient points from previous chapters.

IMPACT ON IRAQ

By several metrics, the situation inside Iraq has improved since the election of January 2005. Increases have been seen in oil revenue, electricity provided, telephone service, school enrollment, and a host of other economic and quality of life indicators. Iraqi combat forces (police, military and National Guard) have grown by twenty-eight thousand in only three months. The estimated number of insurgents has dropped to the lowest point in the past year, as has the number of US casualties. Car bombings have dropped by almost half. Iraqi civilian deaths are the lowest since the summer of 2004. Most importantly, sixty-one percent of Iraqis polled felt the country was now going in the right direction, an increase of thirteen percent since early January.[4]

But, security remains paramount. When asked if they fear for their safety, fifty-three percent of Iraqis strongly agreed. Coalition troop strength reached 180,000 during January 2005, the highest level in the post-invasion period. It has since been reduced, but there are still 164,000 multi-national soldiers on duty in Iraq. This is a significant presence, and a necessary one. The new government of Iraq has asked this force to remain, to ensure the successful transition of the country. And, these foreign forces could remain for a number of years. As Secretary of Defense Donald Rumsfeld commented during a visit to Iraq in early April 2005, "We don't really have an exit strategy. We have a victory strategy."[5]

The Iraqis need formal, committed, long-term support so that they can reform their political system and rebuild their nation. Military assistance is only one part, but it is the component that guarantees all others. Iraq can only develop and prosper when it is safe. Democracy and security are mutually dependent in Iraq. There is a symbiotic relationship between the two, and Iraqis will require both. The safety and trust of the people will count on each part.

INTERESTS OF NATO

NATO is the world's most capable, most credible, most experienced multinational military Alliance. There are myriad reasons for separate NATO nations to consider expanding Alliance operations in Iraq. This report developed two, economic and military, and both will be briefly revisited to stress how separate member nations could benefit.

Oil is the largest traded commodity in the world, and constitutes thirty-five percent of the world energy share. Natural gas use is currently at twenty-one percent of the world consumption, and will soon surpass coal and the second most prominent fuel source. The Persian Gulf provides roughly one-fourth of the world's demand of these fluid fossil fuels. Five of the top twelve petroleum net exporters are in the Persian Gulf; when Iraqi oil production reaches its stated goal, the region will have five of the world's top eight. This production is important to the world economy, and even more so to some NATO member nations.

As a share of total net imports, the Persian Gulf accounts for thirty percent of European oil importation. The United States is the world's largest oil importing nation, but it is also the second largest oil producer. Only twenty-one percent of American oil imports come from the Persian Gulf. In 2003, there were twelve European NATO members that each imported more than one thousand barrels a day from the region. Four of these imported over a quarter million barrels apiece, per day, from the Persian Gulf. Despite rough economic parity (between the GDP of United States and the combined total of other NATO members), if crude oil imports are broken down (as in Table 3.2), the American imports are 115,000 barrels less than the combination of twelve NATO members. Over the past fourteen years, these twelve NATO nations have used almost sixty percent more Persian Gulf oil than the United States. The largest European importers (Italy, France, Netherlands, and Spain) purchased a combined total of 1.54 million barrels of Persian Gulf oil every day in 2003. Is it fair to ask: Is the US military bearing the burden for protecting European economies?

The European Union is a net energy importer. Germany, Italy, and France are the largest energy importing nations. In 2001, oil was the dominant EU fuel, accounting for forty-three percent of total energy consumption. Natural gas was second, at twenty-three percent. The EU possesses 0.6 % of the world's proven oil reserves, and two percent of the natural gas reserves. By 2020, it is estimated that two-thirds of the EU's total energy requirements will be imported. Resources from the Persian Gulf will remain critical to the economies of NATO's European nations.

Additionally, world prices of crude oil will be greatly influenced by events in the Persian Gulf. As documented in Chapter Three, political instability in the region leads to oil price fluctuations. As depicted in Figure 3.6, oil prices have spiked during twelve crises in the Persian Gulf region. During these events, production suffered. Further, Table 3.5 highlighted the lingering effects of instability. Tabulating six major regional crises revealed that crude oil production dropped, on average, 2.7 million barrels per day at the outset. Additionally, the average time required for Persian Gulf production to return to pre-crisis levels was two years and eight months.

Tension in the region can result in what economists call a "risk premium," a price increase of fluid fossil fuels, which is passed on to consumers. Concern with flow, pricing, transportation, and resource availability causes suppliers to raise prices to deal with uncertainties. At the end of 2004, this was estimated to be approximately ten US dollars per barrel of unrefined crude oil on the world market.

This report has sought to provide a systematic analysis of energy security, to enhance the justification for NATO action in Iraq. Production, use, dependencies and costs of fluid fossil fuels are factors that should be considered. They should openly weigh on any NATO decision. However, it is recognized that these economic points alone are not sufficient justification for further intervention, but they remain important and must be considered in any discussion surrounding Iraq.

The second area of benefit, which this report introduced, concerns the military forces of individual NATO countries. Chapter Four documented the defense budgets, manpower, and equipment of the separate members of the Alliance. In 2002 and 2003, the average defense expenditure for a NATO member nation was just under two percent of the GDP. A closer look, though, shows that challenges remain for individual members. As documented on the NATO website, some NATO members have bloated personnel costs, which limit the amount of funds for operations, modern equipment and capabilities, and research and development.

As tabulated in this report and its appendices, the United States is the world's foremost investor in its military. Forty-three percent of the world's defense expenditures are made by the United States. If NATO forces are to operate together, investments need to be precisely targeted to enhance effectiveness and interoperability among the Allies. Otherwise, as the chart below shows, there is a great risk that American forces will be operating on a much higher level than its allies, limiting the potential contribution that could be made by the other twenty-five members of the Alliance.
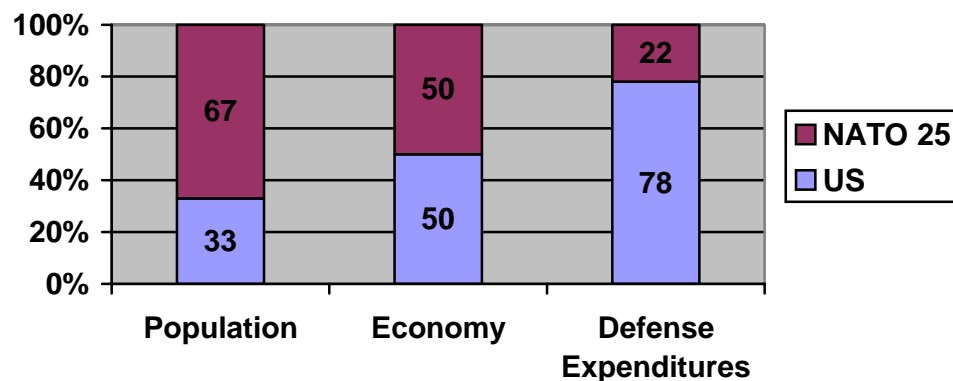
Figure 6.1. United States as a percentage of NATO, 2002 data. See Appendix I for
        itemized lists by country and component.

Hubert Vedrine, former French Foreign Minister, coined the term "*hyperpuissance"* (literally, superpower, but meant to mean even more--one without equal) to describe the US position in the world. Nowhere is this more evident that in the investment and capability of military power.

But, NATO is an Alliance, and it is when combined that the true potential and benefits are revealed. The seven NATO nations that invest most heavily in defense account for sixty percent of the world's military spending. Of 158 nations assessed, these seven are in the top eight percent worldwide. Even without the United States forces, NATO has over two million active duty military members, over twenty-eight thousand armored combat vehicles, and over fifteen thousand tanks. The money and the forces are there.

And NATO has the experience. In the past ten years, NATO has deployed sixty thousand soldiers to Bosnia, gone to war in Kosovo and deployed forty-three thousand soldiers to keep the peace, and sent almost four thousand troops to Macedonia. NATO leaders, answering to the North Atlantic Council, commanded of all of these out of area, multinational operations. Currently, NATO is heavily involved in security and rebuilding activities in Afghanistan. In ISAF, there are thirty-four nations and over six thousand soldiers under NATO command. Beginning these operations showed that NATO can reach political consensus on complex international issues. Continuing them showed that the Alliance can hold together and persevere amid setbacks and crises. Ending them successfully showed that NATO realized the purpose of these operations, and continued to support them until their tasks were complete. NATO can act with unanimity when the cause is deemed significant. NATO can deploy forces and support them in out of area operations. NATO is the worlds' premier security organization and has made significant contributions beyond its borders.

Transformation, meaning induced change, has been endorsed by NATO nations and the NAC. An entire strategic command, Allied Command Transformation, is dedicated to achieving it. The Alliance has the resources; it is a matter of focused effort and targeted spending. Much remains to be done in this area, as transformation is really a process, not a destination. And NATO transformation will provide the means to prepare, deploy, and sustain Alliance forces in future operations. But, it is not enough to seek change, an impetus needs to be driving this process. Iraq is a timely issue, worthy of NATO's full commitment. A NATO-led operation in south-central Iraq would serve as a catalyst for transformation, ensuring the viability and interoperability of NATO's military forces.

President Jalal Talabani, the first freely elected in Iraq, recently expressed his gratitude to the world community, and NATO in particular, and challenged nations to help assist his country's transition to a stable, safe, democracy:

> Now, the time has come for the rest of the world to recognize that a federal, democratic Iraq that can defend itself against terrorism is a goal worthy of broad international support. The victory of the new Iraq will be the triumph of freedom over hate, of decency over intolerance. Who would not want to share in such a worthy campaign? [6]

Roughly twenty-three thousand NATO soldiers would be required to perform military missions within five governorates in south-central Iraq. One-third of these would be at risk in direct combat roles. The current area of operations for the Polish Multinational Division includes Babil, An Najaf, Al Qadisiyah, Wasit, and Karbala. The Polish government has announced that their troops will leave Iraq by the end of 2005. NATO soldiers, operating under the NATO flag, commanded by a NATO general, and answering to the North Atlantic Council, should assume full military responsibilities.

Iraq is one of the greatest challenges facing the international community today. This report attempted to show that NATO has the interests and the capabilities to fully contribute to the successful transition of that country. What is done, or not done, by

NATO will greatly affect Iraq's future. The question is not merely what is the future of Iraq? But, also, what is the future of NATO?

The choice is for NATO leaders to make. Regardless of the decision, there will be a direct impact on Iraq, the Persian Gulf, and the Alliance. Ultimately, this report has attempted to stress several simple points: Out of area is the issue. Iraq is the place. NATO is the force. The time is now. The very relevance of the Alliance is at stake.

Notes

[1] R Nicholas Burns, "The War on Terror is NATO's New Focus," *International Herald Tribune*, 6 October 2004.

[2] He further added that the Alliance leaders must show the connection between these operations and the personal safety of NATO citizens, bridge the gap between political commitments and military (and financial) resources. He also specifically mentioned the EU, the UN and the Organization for Security and Cooperation in Europe. Remarks by Secretary General Jaap de Hoop Scheffer at the Clingendael Institute, "Global NATO?" 29 October 2004, http://www.nato.int/docu/speech/2004/s041029a.htm

[3] Statement on Iraq issued by the Heads of State and Government meeting of the NAC, Istanbul, 28 June 2004, http://www.nato.int/docu. For complete text of statement, see appendix.

[4] All of these indicators are shown and documented in Brookings, *Iraq Index*, updated 11 April 2005.

[5] CNN "Rumsfeld in Iraq on Unannounced Visit," 12 April 2005, http://www.cnn.com/2005/WORLD/meast/04/12/iraq.main/index.html.

[6] Jalal Talabani, "In Iraqis We Trust," *The Wall Street Journal*, 11 April 2005, p. 22.

Appendix A

Charter of the United Nations
San Francisco, 24 October 1945
Article 51

Nothing in the present Charter shall impair the inherent right of individual or collective self-defense if an armed attack occurs against a Member of the United Nations, until the Security Council has taken measures necessary to maintain international peace and security. Measures taken by Members in the exercise of this right of self-defense shall be immediately reported to the Security Council and shall not in any way affect the authority and responsibility of the Security Council under the present Charter to take at any time such action as it deems necessary in order to maintain or restore international peace and security.

North Atlantic Treaty
Washington, 4 April 1949
Referenced Articles

Article 3

In order more effectively to achieve the objectives of this Treaty, the Parties, separately and jointly, by means of continuous and effective self-help and mutual aid, will maintain and develop their individual and collective capacity to resist armed attack.

Article 4

The Parties will consult together whenever, in the opinion of any of them, the territorial integrity, political independence or security of any of the Parties is threatened.

Article 5

The Parties agree that an armed attack against one or more of them in Europe or North America shall be considered an attack against them all and consequently they agree that, if such an armed attack occurs, each of them, in exercise of the right of individual or collective self-defense recognized by Article 51 of the Charter of the United Nations, will assist the Party or Parties so attacked by taking forthwith, individually and in concert with the other Parties, such action as it deems necessary, including the use of armed force, to restore and maintain the security of the North Atlantic area.

Any such armed attack and all measures taken as a result thereof shall immediately be reported to the Security Council. Such measures shall be terminated when the Security Council has taken the measures necessary to restore and maintain international peace and security.

Article 6

For the purpose of Article 5, an armed attack on one or more of the Parties is deemed to include an armed attack:

- on the territory of any of the Parties in Europe or North America, on the Algerian Departments of France, on the territory of or on the Islands under the jurisdiction of any of the Parties in the North Atlantic area north of the Tropic of Cancer;
- on the forces, vessels, or aircraft of any of the Parties, when in or over these territories or any other area in Europe in which occupation forces of any of the Parties were stationed on the date when the Treaty entered into force or the Mediterranean Sea or the North Atlantic area north of the Tropic of Cancer.

Appendix C

Statement issued by the North Atlantic Council
Brussels, 12 September 2001

The Council agreed that if it is determined that this attack was directed from abroad against the United States, it shall be regarded as an action covered by Article 5 of the Washington Treaty, which states that an armed attack against one or more of the Allies in Europe or North America shall be considered an attack against them all.

The commitment to collective self-defense embodied in the Washington Treaty was first entered into in circumstances very different from those that exist now, but it remains no less valid and no less essential today, in a world subject to the scourge of international terrorism. When the Heads of State and Government of NATO met in Washington in 1999, they paid tribute to the success of the Alliance in ensuring the freedom of its members during the Cold War and in making possible a Europe that was whole and free. But they also recognized the existence of a wide variety of risks to security, some of them quite unlike those that had called NATO into existence. More specifically, they condemned terrorism as a serious threat to peace and stability and reaffirmed their determination to combat it in accordance with their commitments to one another, their international commitments and national legislation.

Article 5 of the Washington Treaty stipulates that in the event of attacks falling within its purview, each Ally will assist the Party that has been attacked by taking such action as it deems necessary. Accordingly, the United States' NATO Allies stand ready to provide the assistance that may be required as a consequence of these acts of barbarism.

Appendix D

Units for Oil and Natural Gas[1]

Oil

Crude oil contains a wide variety of hydrocarbons, so density (specific gravity) is also required. Examples include
- Liquid petroleum gases < 520 kg/m^3
- Heavy > 900 kg/m^3

The industry standard is American Petroleum Institute (API) gravity, a measuring scale that is calibrated in degrees.

Accepted units of measurement vary around the world:
- Mass
  - Metric ton (used in Europe)
- Volume
  - Cubic meters (Japan)
  - Barrel (US)

This report will use barrels per day (brl/d)

Natural Gas

There are two types of quantification for Natural Gas
- Volume
  - Due to compressibility, any figures also require temperature and pressure
  - Normal conditions are 0 degrees Celsius (C) at 1 atmosphere of pressure (760 millimeters of Hg)
  - Standard conditions are 15 degrees C at 1 atmosphere
  - Usually expressed as cubic meters (m^3) or cubic feet (ft^3)
  - This report uses Million cubic meters (Mm^3)
- Energy content
  - Heating value
  - Califoric content used--heat related to complete combustion

- o Figures can be gross or net--the difference is latent heat of vaporization. On average, gross value will be 10% higher.
- o Expressed as joules, calories, kilowatt, British thermal unit, or therms

Notes

[1] For further explanation of these terms and concepts, see the following: International Energy Agency, *Energy Statistics Manual*, pp. 55, 69, 72; US Energy Information Agency, "Energy Glossary," http://www.eia.doe.gov/glossary/glossary_main_page.htm

Appendix E

Conversion Factors[1]

Gaseous Fuels
1 cubic meter   35.315 cubic feet

LNG
1 metric ton   48,700 cubic feet of natural gas

Liquid Fuels
1 barrel   42 US gallons or 159 liters
1 cubic meter   6.289 barrels

Heat Equivalent
1 joule   107 ergs or 1 watt-second.
1 exa joule 10^{18} joules
1 exa joule   0.9478 quadrillion Btu
1 quadrillion Btu   1.055056 exa joules

Notes

[1] See US EIA website, table C1, General Conversion Factors, http://www.eia.doe.gov.htm.

Appendix F

Table A.1 NATO Nations & Associated Memberships

	NATO	OECD	EU
Belgium	X	X	X
Bulgaria	X		
Canada	X	X	
Czech Republic	X	X	X
Denmark	X	X	X
Estonia	X		X
France	X	X	X
Germany	X	X	X
Greece	X	X	X
Hungary	X	X	X
Iceland	X	X	
Italy	X	X	X
Latvia	X		X
Lithuania	X		X
Luxemburg	X	X	X
Netherlands	X	X	X
Norway	X	X	
Poland	X	X	X
Portugal	X	X	X
Romania	X		
Slovakia	X		X
Slovenia	X		X
Spain	X	X	X
Turkey	X	X	
United Kingdom	X	X	X
United States	X	X	

Appendix G

Statement on Iraq
Issued by the Heads of State and Government
Meeting of the North Atlantic Council
Istanbul, 28 June 2004

We, the 26 Heads of State and Government of the nations of the Atlantic Alliance, meeting in Istanbul, declare our full support for the independence, sovereignty, unity, and territorial integrity of the Republic of Iraq and for strengthening of freedom, democracy, human rights, rule of law and security for all the Iraqi people.

We welcome the unanimous adoption of Security Council Resolution 1546 under Chapter 7 of the Charter of the United Nations as an important step towards Iraq's political transition to democratic government. We pledge our full support for the effective implementation of UNSCR 1546.

We are united in our support for the Iraqi people and offer full cooperation to the new sovereign Interim Government as it seeks to strengthen internal security and prepare the way to national elections in 2005.

We deplore and call for an immediate end to all terrorist attacks in Iraq. Terrorist activities in and from Iraq also threaten the security of its neighbors and the region as a whole.

We continue to support Poland in its leadership of the multinational division in central-south Iraq. We also acknowledge the efforts of nations, including many NATO Allies, in the Multinational Force for Iraq, which is present in Iraq at the request of the Iraqi government and in accordance with UNSCR 1546. We fully support the Multinational Force in its mission to help restore and maintain security, including protection of the United Nations presence, under its mandate from the Security Council.

In response to the request of the Iraqi Interim Government, and in accordance with Resolution 1546 which requests international and regional organizations to contribute assistance to the Multinational Force, we have decided today to offer NATO's assistance to the government of Iraq with the training of its security forces. We therefore also encourage nations to contribute to the training of the Iraqi armed forces.

We have asked the North Atlantic Council to develop on an urgent basis the modalities to implement this decision with the Iraqi Interim Government.

We have also asked the North Atlantic Council to consider, as a matter of urgency and on the basis of a report by the Secretary General, further proposals to support the nascent Iraqi security institutions in response to the request of the Iraqi Interim Government and in accordance with UNSCR 1546.

Appendix H

Table A.2 Selected Military Holdings of 25 NATO Countries

	Active Duty Manpower	Tanks	Armored Combat Vehicles	Artillery	Attack Helicopters	Combat Aircraft
Belgium	42,000	142	588	192	46	128
Bulgaria	42,000	1,473	1,856	1,692	24	212
Canada*	52,300	114	1,140	289	0	60
Czech Republic	49,000	303	666	397	33	108
Denmark	19,000	225	278	405	12	68
Estonia*	5,000	0	20	19	0	0
France	181,000	1,020	3,092	773	265	540
Germany	253,000	2,171	2,406	1,641	199	361
Greece	143,000	1,683	2,141	1,909	20	543
Hungary	32,000	704	1,404	750	49	78
Iceland*	0	0	0	0	0	0
Italy	165,000	1,189	2,940	1,490	116	484
Latvia*	4,900	3	13	26	0	0
Lithuania*	13,500	0	137	72	0	0
Luxemburg*	1,000	0	0	0	0	0
Netherlands	38,000	298	724	385	22	141
Norway	19,000	165	209	112	0	57
Poland	137,000	1,036	1,380	1,112	110	180
Portugal	35,000	187	347	377	0	100
Romania	105,000	1,256	1,856	1,178	21	105
Slovakia	23,000	268	526	373	19	65
Slovenia*	6,600	70	64	24	0	9
Spain	127,000	535	989	1,001	28	161
Turkey	364,000	2,375	3,015	2,992	28	358
UK	201,000	421	2,403	416	272	504
Totals	2,058,300	15,638	28,194	17,625	1,264	4,262

Source: IISS, *The Military Balance, 2004-2005,* pp. 33, 47, 58-60, 68, 252.
Notes: US figures not shown. For US data, see IISS text listed above.   Manpower rounded to the nearest one thousand. All but those marked by * are declared as of 1 January 2004, as part of the Conventional Forces in Europe Treaty.

Appendix I

Table A.3 Defense Related Figures, NATO Nations 2002

Nation	GDP (B US$)	Population (K)	GDP/capita (K US$)	Defense Expenditures (B US$)*	DE/capita** (US$)	DE as % GDP
Belgium	277	10,388	26,827	3.6	332	1.3
Bulgaria	15.7	7,814	2,021	.4	48	2.5
Canada	732	31,478	23,256	8.2	247	1.1
Czech Republic	69	10,287	6,721	1.5	136	2.1
Denmark	172	5,314	32,435	2.7	483	1.6
Estonia	6.3	1,383	4,529	.099	68	1.6
France	1,600	59,729	26,841	40.2	636	2.5
Germany	2,200	82,148	27,234	33.3	383	1.5
Greece	149	10,624	14,069	6.5	579	4.4
Hungary	65	9,849	6,571	1	110	1.8
Iceland	8	285	29,631	n/a	-	-
Italy	1,300	57,438	23,300	24.1	421	1.9
Latvia	8.4	2,366	3,533	.149	60	1.8
Lithuania	13.9	3,692	3,756	.247	68	1.8
Luxemburg	24	441	53,795	.204	438	.9
Netherlands	479	15,975	29,966	7.7	459	1.6
Norway	192	4,524	42,404	3.6	759	1.9
Poland	188	38,618	4,881	3.6	88	1.9
Portugal	137	10,021	13,694	3.1	294	2.3
Romania	45.7	22,332	2,049	1.1	45	2.3
Slovakia	22.7	5,400	4,207	.464	81	2.0
Slovenia	22	1,998	11,017	.329	156	1.5
Spain	738	40,026	18,445	8.7	206	1.2
Turkey	182	68,652	2,656	9.2	127	5.1
UK	1,600	59,702	26,318	37.3	590	2.4
US	10,400	289,696	36,058	348.5	1,138	3.3
Totals	20,646.7	850,180		448.293		
Average			17,637		308	1.99

Source: IISS, *The Military Balance, 2003-2004.*

Notes: * Within the text listed above, figures differ in the section titled "Europe, Part II," and Table 33, p. 335. These figures from part II. ** figures from Table 33.

Appendix J
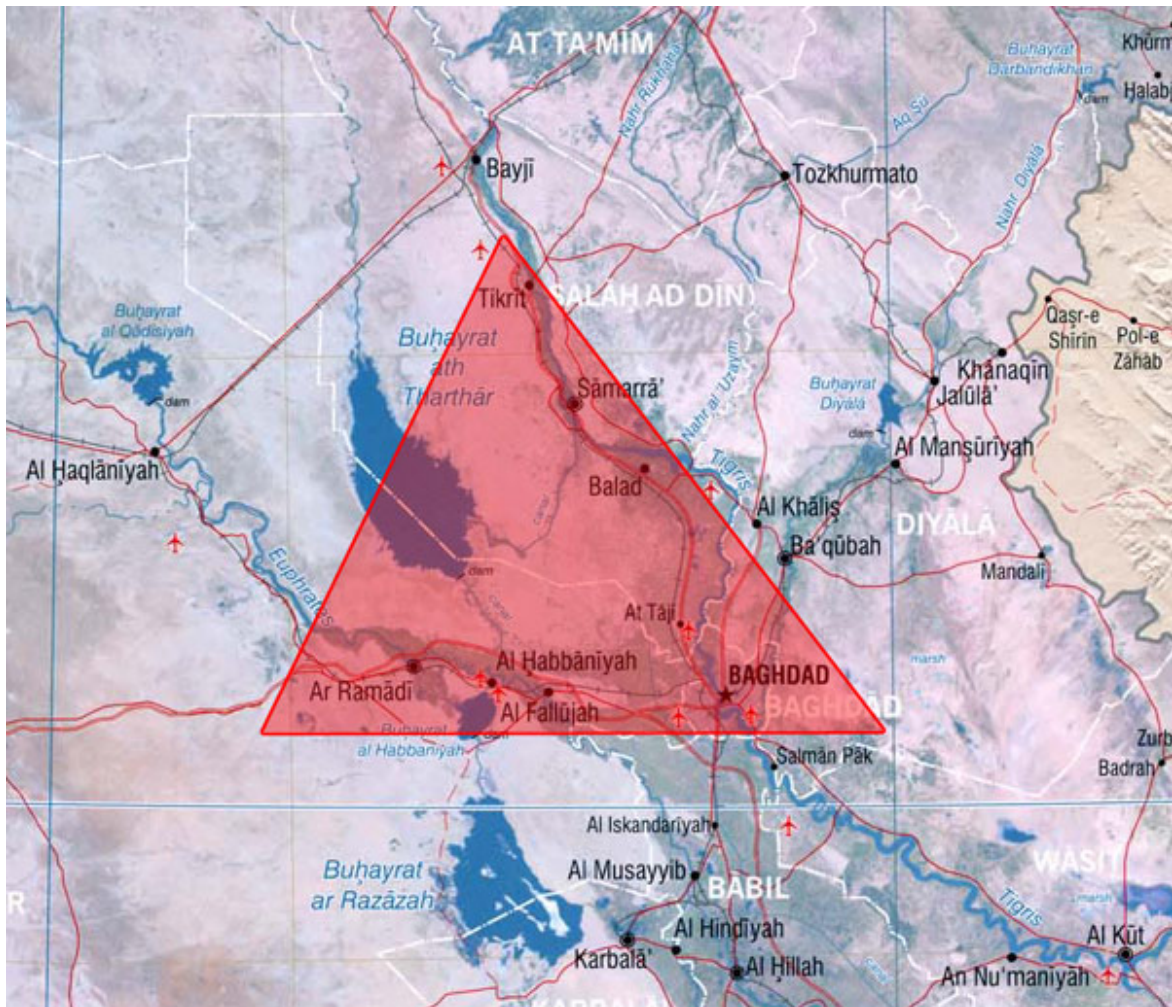
Figure A.1 The Sunni Triangle in Iraq. Note the relation to the cities listed in Table 5.__. Six of the seven most violent urban areas are in the Sunni Triangle. Mosul is the only one not in this region. Note that some city names have been written with the Arabic prefix *Al*. From http:// www.WorldHistory.com/wiki/S/Sunni-Triangle.htm.

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